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DEPARTMENT OF BUSINESS
AND ECONOMIC DEVELOPMENT

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STATISTICAL & ECONOMIC REPORT

RESEARCH & ECONOMIC ANALYSIS DIVISION

- The Economy: Recent Trends and Outlook
- Overview of Federal Activity in Hawaii
- Statistical Tables

1ST & 2ND QUARTERS 1988

STATE OF HAWAII
1959

This quarterly report has been prepared by the Research and Economic Analysis Division of the State Department of Business and Economic Development (DBED). It presents information and analysis concerning current statistical and economic trends affecting Hawaii. Technical notes and source descriptions have been kept to a minimum. However, the staff of the Research and Economic Analysis Division will be happy to respond to any inquiries of a technical nature that readers may have (548-3062).

The report was prepared under the direction of Dr. Richard Y. P. Joun, Head, Research and Economic Analysis Division, by Robert Shore, Sharon Nishi, Tu Duc Pham, and Hamid Jahanmir.

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1. The Economy: Recent Trends and Outlook

In 1987 Hawaii's economy turned in one of its best performances of the 1980s on the strength of surging tourism from abroad and a three-year-old construction boom which shows no clear sign of a downturn in the near future. Gross State Product (GSP) reached an estimated $19.8 billion in 1987, 5.2 percent over 1986 in constant dollar terms. This compares with a modest 2.9 percent increase in Gross National Product (GNP) for the U.S. as a whole.

Nationally, the initial fears of a recession in 1988, which were generated by last October's stock market crash, have given way to modest optimism that the economy may do well after all, at least during the election year.

The outlook for Hawaii's economy in 1988 continues to anticipate a year of moderate growth, with continued strong growth in the foreign tourism market tempered by modest gains in domestic tourism. Growth in tourism, coupled with continued construction activity, will have some insulating effect on Hawaii even if economic conditions on the Mainland unexpectedly deteriorate in 1988.

CURRENT ECONOMIC TRENDS

Hawaii's Economy

Besides the healthy increase in GSP, the strength of last year's economic growth was reflected prominently in an overall 11 percent surge in total transactions in the State's economy (those subject to excise and use tax). Not surprisingly, the big gains in sales volume for the year were in the construction industry, where taxable receipts jumped almost 19 percent for the year, and hotels, with a nearly 17 percent increase in revenue for 1987. Personal income in the State for 1987 showed a 7 percent increase from 1986, compared with a 6 percent increase at the national level.

All this activity had a major impact on the labor market where a 4.5 percent growth rate in new hires added a record 22,100 jobs to the State's economy in 1987. The State's official unemployment rate fell to an average 4 percent for the year, the lowest level since the 1960s and among the lowest rates in the nation.

Unfortunately, last year's economic activity also left its mark on consumer prices as measured by the Honolulu Consumer Price Index (CPI-U). The index showed an overall 5.0 percent increase for the year, compared to a 3.6 percent increase nationally. This is the highest rate of consumer inflation for Hawaii since 1982.

Behind Hawaii's recent surge in economic activity has been the dramatic rise in the value of foreign currency with respect to the dollar over the past two years. This factor has prompted a boom in foreign tourism to the State and a large increase in foreign investment capital. The principal source of this foreign interest has been the Japanese, whose currency has increased over 100 percent against the dollar since early 1985, making U.S. goods and services roughly 50 percent cheaper from a simple exchange rate standpoint. Also contributing to the accelerated rate of State economic growth has been the stable (albeit modest) growth of the U.S. economy, which has provided an underlying base of low inflation and relatively low interest rates.

Tourism to Hawaii in 1987 increased 3.4 percent overall, to 5.8 million visitors. This was at the lower end of the 3 to 5 percent increase expected at the beginning of the year, but it was better than the bleak outlook in mid 1987 when it appeared that the State might see no gain at all for the year. However, foreign tourism, particularly from Japan, showed much more strength than anticipated; and an upturn in Mainland tourism in the Fall brought overall visitor growth for the year into the predicted range. Overall, foreign tourism increased 14 percent in 1987 compared to a 2 percent decline in tourism to the Islands by U.S. residents.

A strong yen is not the only reason Japanese visitors have been flocking to Hawaii in greater numbers over the past two years. Another important reason is the Japanese government's "Ten Million Program." This is an effort to increase the number of overseas Japanese travelers to 10 million by the end of 1991, almost double the 1986 total. The program is one strategy by which the Japanese government is attempting to reduce its excessive positive trade balance with most other nations. Japan is apparently quite serious about influencing the Japanese travel industry to achieve this goal, and according to some Hawaii visitor industry experts the program appears to be ahead of schedule at this point.

By direction of travel, westbound tourism coming from the Mainland U.S. and Canada declined 1 percent. Eastbound visitor traffic from Asia and the Pacific was up 18 percent in 1987.

Visitor spending in 1987 was up a substantial 16 percent from 1986 due to the increase in the higher-spending Japanese visitor segment. All totaled, visitors spent an estimated $6.4 billion in Hawaii last year compared with $5.5 billion the previous year.

Preliminary data for the first quarter of 1988 showed continued weakness in the Mainland tourism market, balanced by further robust gains in Japanese tourism resulting in nearly a 3 percent increase in the total visitor count from the same period in 1987.

Construction turned in another boom year in 1987 showing nearly a 19 percent increase in current dollar work completed amounting to $2.1 billion. Permit data showed that the most active area was commercial and industrial construction (which includes hotels), up 29 percent to $344 million. Residential construction showed an 11 percent increase in permit value to $507 million, while total government contracts awarded in 1987 declined 12 percent to $372 million.

For construction, 1987 was the third consecutive recovery year from the devastating 1981-84 slump, which saw a 34 percent decline in the number of construction jobs. Despite the exceptional increase in activity since 1985, the construction work force, at 20,950 in 1987, is still only 87 percent of its 1980 level and about 75 percent of its all-time high, 1974 level of 27,900. Even if current growth projections for the industry prove correct, it will be 1991 before the construction work force regains its 1980 level in terms of jobs.

Defense expenditures in Hawaii increased more than 6 percent in 1987 by preliminary figures. The military services spent almost $1.9 billion last year for costs ranging from military and civilian workers pay, to locally purchased goods and services including construction. Last year's growth was a turn around year from a 9 percent decline in military expenditures in 1986. A 30 percent decline in locally purchased goods and services was the primary cause of the 1986 decline.

Sugar and pineapple production both experienced further declines in their respective work force in 1987. Jobs in sugar processing and field operations declined almost 6 percent last year while pineapple operations had 2 percent less jobs. Nevertheless, production increased for pineapple in 1987 with total receipts reaching $252 million, 4 percent higher than in 1986. Sugar production, on the other hand, fell 6 percent in 1987 to 979,000 tons. Since prices received by sugar companies have remained relatively stable over the past year, it is likely that returns probably fell by about the same amount. Returns in 1986 totaled $377 million.

Last year's economic performance also contributed to a healthy 17 percent increase in State General Fund tax revenues for calendar year 1987. General excise and use tax collections and individual income tax payments each increased over 11 percent last year. However, the most impressive gain was in corporate income tax collections, up 46 percent for the 1987 calendar year. The State's fiscal year, which will not end until June, is expected to show similarly impressive increases in State revenues. Outside of sugar and pineapple, it was difficult to find any other sector of the State's economy which was not sharing in the year's relative prosperity. Even diversified manufacturing, which has had a number of rough years recently, showed nearly a 3 percent increase in jobs for the year.

Diversified agriculture experienced a sharp turnaround in its two-year decline in jobs. The industry shows a 16 percent increase in salaried and self-employed workers for 1987. However, output in that industry showed only a marginal 2 percent increase last year based on excise tax data. Lower prices for coffee and papaya, two of Hawaii's key diversified export crops, may have been partly to blame for the lack of growth in last year's sales.

The National and International Economies

Early indicators of 1988 U.S. economic activity have reduced the fears of a recession in the near future. In some quarters, including the influential Federal Reserve System, there now appears to be more concern about the prospects for inflation than recession.

Following the October stock market crash, a number of economists concluded that the nation had already entered a recession, based on lack of growth in the money supply during the previous six months and anticipated spending retrenchment after the crash. However, the economy turned in respectable performances in both the fourth quarter of 1987 and the first quarter of 1988, disspelling the recession fears.

One explanation for continued expansion of the economy in the face of contradictory indicators is interest rates. Despite the widespread concern over the consequences of last October's stock market crash, it had a beneficial (downward) effect on interest rates. Apparently, institutional and many individual investors in the equity (stock) market moved a considerable portion of stock sale proceeds to the less risky debt market (corporate and government bonds, and securities). In addition, the Federal Reserve System injected reserve-money liquidity into the financial system for several weeks after the crash. Consequently, interest rates which had been rising during most of 1987 declined to early 1987 levels where they have remained through the first quarter of 1988.

Now with economic prospects somewhat better than in previous months, the chairman of the Federal Reserve Board, Alan Greenspan, has alerted Congress and the markets of his intention to combat "accumulating price pressures" with higher interest rates if needed. Greenspan's view is that the unemployment rate is as low as it can get without generating such pressures, first on the labor cost side and later on prices. He would like to curb demand in the economy to discourage that first stage of a possible wage price spiral. Those pressures, Greenspan thinks, will come from the combination of rising export production and a redirection of U.S. consumer demand away from foreign exports and towards domestically produced goods. These could both stem from the lower value of the dollar which makes U.S. goods cheaper to foreigners and foreign goods more expensive to U.S. consumers.

Internationally, the economies of many nations are apparently being buoyed by the domestically-fueled economic expansion in Japan, according to analysis by the Organization of Economic Cooperation and Development (OECD). This is important because as the U.S. dollar declines with respect to foreign currencies, those nations experience a decline in the demand for their exports by the U.S. and competition from the U.S. in other export markets. Japan's imports could help compensate for that shift and help avert a broad-based recession outside the U.S.

ECONOMIC OUTLOOK FOR 1988 AND BEYOND

Following the October 1987 stock market crash, most economists lowered their 1988 forecasts for the growth rate of the national economy sharply downward, and some even forecast a recession. However, better than anticipated economic conditions in subsequent months, especially improvement in U.S. exports, have resulted in a more optimistic outlook for the economy in recent weeks.

Table 1-1 presents the most recent (April 1988) "consensus" forecast published by the Blue Chip Economic Indicators. The consensus is actually an average of roughly 50 major national economic forecasts and has tended to be a more reliable forecast over time than any of the individual 50 forecasts.

The April consensus forecast for real GNP growth in 1988 shows a 2.7 percent increase. The forecast for inflation in 1988 anticipates an advance of 3.3 percent for the GNP deflator and an increase of 3.9 percent for the National Consumer Price Index. The national unemployment rate is expected to decline from 6.2 percent in 1987 to 5.8 percent in 1988.

U.S. economic growth in early 1988 will be slowed somewhat due to high inventory growth in the fourth quarter of 1987. New production will tend to lag until that inventory is worked down. While consumption spending is slowing down, business-fixed investment and net foreign exports are expected to improve this year. The foreign trade deficit is expected to decline from $136 billion in 1987 to $106 million this year (in terms of constant 1982 dollars). The consensus forecast indicates business investment will increase 5.1 percent in 1988. Because of modest growth in the national economy and money supply, interest rates will remain at about current levels.

Beyond 1988, the National economic outlook is considerably less certain. The April consensus forecast of 1989 growth in real GNP is 2.2 percent. About 20 percent of the major national forecasts surveyed predict growth below 2 percent, while another 20 percent of the forecasts expect growth above 3 percent.

Table 1-2 presents DBED's updated economic outlook for Hawaii. Economic conditions in Hawaii are, of course, greatly influenced by the performance of the U.S. and world economies. For tourism, the favorable yen/U.S. dollar exchange rate and strong growth of the Japanese economy will stimulate more visitors from Japan, and their spending will increase further in Hawaii in 1988. Because of this, DBED expects the number of eastbound visitors to show a gain of about 12 percent during 1988, which would follow increases of 18 percent in 1987 and 15 percent in 1986. However, slowing economic growth in the U.S. and higher hotel room rates in Hawaii will likely hold down the growth of westbound (primarily Mainland U.S.) visitors to about 1 percent over 1987. As a result,

Table 1-1
COMPOSITE FORECAST OF KEY U.S. ECONOMIC VARIABLES: 1987 AND 1988

a. Growth Rates 1/

	Quarterly growth					Annual growth rates	
	1987 Actual	1988 Estimated forecast				1987 to 1988	1988 to 1989
Variable	Q 4	Q 1	Q 2	Q 3	Q 4		
Real GNP	4.8	2.3	1.9	2.3	2.5	2.7	2.2
Industrial production	6.6	3.0	2.5	2.9	4.1	3.9	2.8
GNP deflator	2.7	3.2	3.6	3.8	4.1	3.3	4.3
Consumer price index	3.9	3.3	3.9	4.2	4.5	3.9	4.6
Real disposable income	6.0	3.3	1.6	2.4	2.2	2.8	2.0

b. Average Rate for Period (Percent)

	Quarterly data					Annual	
	1987 Actual	1988 Estimated forecast					
Variable	Q 4	Q 1	Q 2	Q 3	Q 4	1988	1989
Unemployment rate	5.9	5.8	5.8	5.8	5.8	6.4	5.9
90-day Treasury bill rate	6.0	5.7	5.8	5.9	6.1	5.9	6.4
AAA corporate bond rate	10.2	9.6	9.5	9.6	9.7	9.1	9.8

1/ Annualized percent change from previous quarter for quarterly data, annual percent change for annual data.

Source: Eggert Economic Enterprises, Inc., Blue Chip Economic Indicators, April 10, 1988; except Q1 GNP growth which is the preliminary estimate by the U.S. Department of Commerce.

the total number of visitors to Hawaii will likely grow about 4 percent this year.

Industry experts expect most of the upsurge in eastbound visitors to benefit Waikiki rather than the Neighbor Islands. Hotel rates on the Neighbor Islands are averaging between 18 to 84 percent more than on Oahu, which may be too much of a premium even for the freer-spending Japanese visitors. Also, most Japanese visitors are in Hawaii for the first time and seem to prefer the pace of Waikiki and Oahu. Repeat Japanese visitors are a smaller percentage of the total (32 percent) than for Mainland visitors (50 percent). This is because the Japanese overseas travelers tend towards visiting new destinations rather than returning frequently to one destination. In fact, while Hawaii is enjoying a roughly 20 percent increase in Japanese visitors so far this year, the West Coast U.S. is experiencing an increase of over 50 percent.

The view that the Neighbor Islands may not share much in this year's eastbound visitor market gains appears to be borne out in the occupancy statistics for the first three months of 1988 (Table 6-4). They show that while Oahu has experienced a modest 4 percent decline in occupancy for the first quarter, the decline for the major Neighbor Islands has ranged from 6 percent on Maui, to 10 percent for the Big Island and Kauai.

For the construction industry, relatively low interest rates will permit continued growth in 1988 although the rate of growth will be considerably below the 21 percent average for each of the two previous years. The total for 1988 will likely show about a 7 percent increase in real terms. Residential housing construction activity may show only a slight increase in 1988. A decline in multi-family units will be offset by increases in the number of single-family units this year. Commercial construction will likely exhibit a double-digit increase. The demand for commercial space has increased due to the expansion of the economy since 1985. Government construction activity will continue to show a moderate increase.

For agriculture, recent trends are expected to continue. Declining employment in sugar and pineapple will be offset by increases in other agricultural production, notably macadamia nuts, flower and nursery products, and papayas.

Expansion of Hawaii's key export industries, particularly foreign tourism, will continue to encourage economic growth in Hawaii, above the national average this year. The stronger Hawaii economy will, however, also continue the trend towards higher inflation in Hawaii. As measured by changes in the Consumer Price Index, consumer inflation in Hawaii was 1.3 percentage points higher than the U.S. in 1987. It is expected that inflation in Hawaii will remain at about the 5 percent level in 1988 as compared to 4 percent for the U.S. as a whole.

Reflecting the somewhat slower growth of construction activity in 1988, personal income will increase about 7 percent this year. The growth rate of jobs will also slow slightly from 4.5 percent in 1987 to 2.8 percent in 1988. Still, this will add over 14,000 new jobs to the economy this year.

Beyond 1988, the economic outlook for Hawaii is more promising than for the nation as a whole. If Hawaii can maintain its share of Japanese visitors and the "Ten Million Program" is successful, the average rate of growth of Japanese visitors to Hawaii would be 10 to 15 percent a year for the next four years. That may offset the impact of a possible U.S. recession, which would tend to slow the growth rate of U.S. Mainland visitor arrivals to Hawaii.

Over the next four years, the current DBED forecast expects moderate growth of the economy at about 2 to 3 percent annually. Visitor and construction expenditures, adjusted for inflation, are both expected to grow at an annual rate of about 4 percent from 1989 to 1991. However, the construction growth rate is predicated on continuation of current interest rate levels. The number of newly created jobs will average about 12,000 annually during the same period, if the major industries grow as anticipated in the forecast.

Table 1-2
DBED ECONOMIC FORECAST FOR HAWAII: 1988 AND 1989

[Calendar years]

Economic variable	Actual		Forecast		Average annual percent change	
	1987	Growth from 1986 (percent)	1988	1989	87-88	88-89
Gross state product						
Millions of current dollars	19,779.5p	9.9	21,280.1	22,823.8	7.6	7.3
Millions of constant 1982 dollars ...	16,516.3p	5.2	17,004.1	17,435.6	3.0	2.5
GSP deflator index (1982=100)	119.8p	4.5	125.1	130.9	4.5	4.6
Visitor arrivals (million)	5.8	3.4	6.0	6.3	4.0	4.0
Consumer price index (1982-84=100)	114.9	5.0	120.7	126.7	5.0	5.0
Personal income (millions of constant 1980 dollars)	12,335	2.4	12,649	12,917	2.4	2.1
Personal income (millions of current dollars)	17,116	8.2	18,400	19,730	7.5	7.2
Total jobs (1,000)	508.9	4.5	523.2	536.5	2.8	2.5
Total construction (constant 1972 dollars)	786.6	15.8	841.6	875.2	7.0	4.0

p Preliminary.

Source: Department of Business and Economic Development, Hawaii Econometric Model Project, April 1988.

2. OVERVIEW OF FEDERAL ACTIVITY IN HAWAII

Since the early 1960s, the focus of economic attention in Hawaii has been on the visitor industry and its dramatic rise to the State's most important source of economic activity. Nevertheless, Federal expenditures, which formerly held the number one position, have remained a critically important source of income, skilled employment, and sales revenue for Hawaii's residents and businesses. This report summarizes the scope of Federal activity in Hawaii and its prospects for the future.

Total Federal expenditures in Hawaii were estimated to be about $4.8 billion in 1987 (Table 2-1 and Figure 2-1). About 43 percent of total 1987 Federal expenditures in the State were defense related, while about 57 percent were channeled through civilian Federal agencies.

The civilian sector of the Federal government's presence in Hawaii is composed of generally routine functions necessary to serve Hawaii's population. Further, the secondary economic impacts or "multiplier effects" of civilian agency expenditures in Hawaii are roughly balanced by Hawaii's loss of Federal revenues collected from residents in the State. Therefore, although civilian Federal agencies are a significant part of the economy, they are not a major source of net outside income to the State, but rather a service to Hawaii's people, paid for primarily by taxes raised in Hawaii.

Defense expenditures in Hawaii, on the other hand, are not made solely as a service to Hawaii's residents but rather because of the State's strategic geographic location with respect to U.S. defense. Defense expenditures are, therefore, a source of net outside income to the State, considerably in excess of Hawaii's prorata tax contribution for national defense.

National Defense Activities in Hawaii

During 1987, total U.S. defense-related expenditures in Hawaii amounted to an estimated $1.9 billion (Table 2-2). The Navy accounted for 48 percent of all expenditures; the Army, 39 percent of the total; the Air Force, 11 percent; and the U.S. Coast Guard, 2 percent of all military-related expenditures (Figure 2-2).

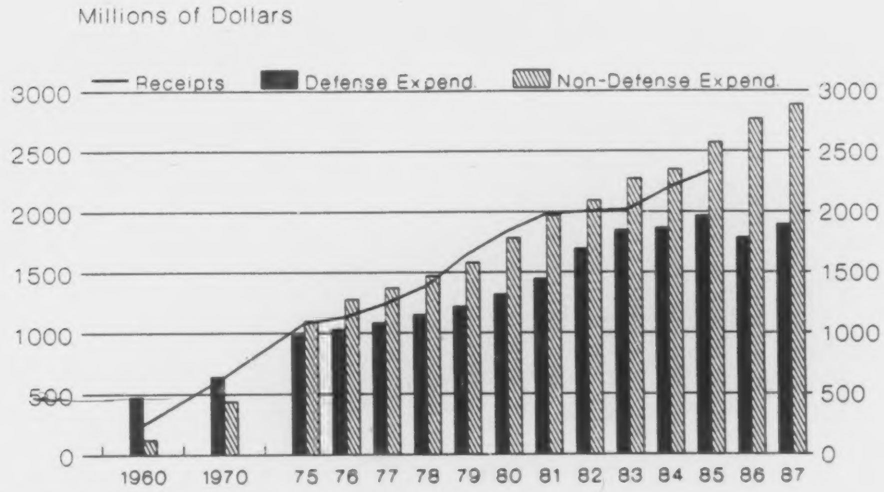
As Table 2-3 shows, the largest component of defense spending in Hawaii is military pay, which comprised about 46 percent of the total in 1987, or $862 million. The next largest category was civilian pay at $576 million (30 percent), followed by the purchase of goods and services locally at about $456 million (24 percent). The fastest growing component of defense spending in recent years has been military pay, which increased 61 percent between 1980 and 1987. Civilian pay increased 38 percent while annual expenditures for goods and services increased 25 percent over the period.

U.S. military establishments in Hawaii are concentrated primarily on the Island of Oahu where the largest installations are the Pearl Harbor Naval Base, Schofield Barracks, Hickam Air Force Base and Kaneohe Marine Corps Air Station (Table 2-4). As Table 2-5 shows, the total number of military personnel stationed in Hawaii as of July 1, 1987, was 58,100, with military dependents numbering 64,900.

An average of about 20,100 Federal civilian employees were engaged in jobs with the three major branches of the military service in Hawaii during 1987 (Table 2-6), almost 62 percent of all civilian Federal employees. The scope of these jobs ranged from unskilled labor to technical and administrative positions. Combined with

Figure 2-1

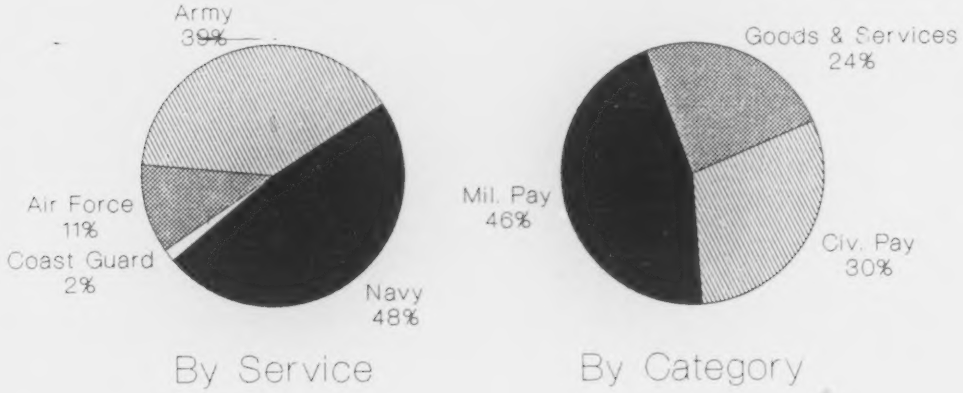
FEDERAL RECEIPTS AND EXPENDITURES IN HAWAII



SOURCE: DBED, compiled from various sources.

Figure 2-2

DISTRIBUTION OF DEFENSE EXPENDITURES: 1987



SOURCE: DBED, Based on Data in Tables 2-2 and 2-3.

Table 2-1
ESTIMATES OF FEDERAL RECEIPTS AND EXPENDITURES IN HAWAII FOR SELECTED YEARS: 1960 TO 1987

[Millions of dollars]

Year	Receipts	Expenditures							
			Defense expenditures				Civilian agency expenditures		
		Total expenditures	Total	Goods & services	Military pay	Civilian pay	Total	Government operations	Grants & transfer payments
1960	245.9	473.2	351.4	104.8	132.0	114.7	121.8	35.1	86.7
1970	634.0	1,077.3	639.4	170.8	238.7	230.0	437.9	75.9	362.0
1975	1,079.8	2,082.0	982.8	304.4	396.4	282.0	1,099.2	129.0	970.2
1976	1,136.5	2,308.9	1,034.2	312.8	420.1	301.3	1,274.7	145.7	1,129.0
1977	1,241.5	2,457.6	1,086.6	328.0	432.8	325.8	1,371.0	154.8	1,216.1
1978	1,391.0	2,626.1	1,155.5	335.5	465.5	354.5	1,470.6	178.0	1,292.6
1979	1,643.5	2,801.5	1,221.8	351.3	497.8	372.6	1,579.7	188.0	1,391.7
1980	1,835.2	3,096.3	1,317.4	365.0	533.7	418.8	1,778.9	206.8	1,572.1
1981	1,983.6	3,417.8	1,449.3	385.9	612.7	450.7	1,968.5	237.7	1,730.9
1982	2,000.9	3,786.3	1,693.4	468.0	716.8	508.6	2,092.9	234.5	1,858.5
1983	2,018.5	4,120.2	1,848.2	496.2	793.8	558.2	2,272.0	249.6	2,022.4
1984	2,198.1	4,218.5	1,867.2	455.9	828.8	582.5	2,351.3	265.2	2,086.1
1985	2,335.6	4,540.2	1,965.4	514.1	839.9	611.4	2,574.8	388.1	2,186.7
1986	(NA)	4,553.0e	1,784.9	360.4	823.0	601.5	2,768.0e	457.0e	2,311.0e
1987	(NA)	4,778.0e	1,893.0e	455.0e	862.0e	576.0e	2,885.0e	463.0e	2,422.0e

e Estimate.

NA Not available.

Source: Quarterly reports from the armed forces; and Hawaii State Department of Business and Economic Development, Hawaii's Income and Expenditure Accounts: 1958 to 1980 (March 1982), Tables 5-2 and 5-3 as revised and updated.

Table 2-2
DEFENSE EXPENDITURES IN HAWAII BY SERVICE: 1970 TO 1987

[Millions of dollars]

Year or quarter	Total	Navy and Marine 1/	Army	Air Force	Coast Guard
1970	639.4	328.7	183.5	114.0	13.2
1975	982.9	469.7	378.3	118.6	16.3
1980	1,317.4	711.3	441.8	141.7	22.7
1981	1,449.3	770.4	493.8	158.3	26.7
1982	1,693.4	878.2	611.5	173.7	29.9
1983	1,848.2	935.9	702.7	182.6	27.0
1984	1,867.2	948.2	685.2	207.6	26.2
1985	1,965.4	955.3	780.4	201.0	28.7
1986	1,784.9	892.0	658.6	202.4	31.9
1987	1,893.1e	910.7	744.3	208.9e	29.2e
	Percent change from previous year				
1980	7.8	11.0	2.8	9.6	2.7
1981	10.0	8.3	11.8	11.7	17.6
1982	16.8	14.0	23.8	9.7	12.0
1983	9.1	6.6	14.9	5.1	-9.7
1984	1.0	1.3	-2.5	13.7	-2.7
1985	5.3	0.7	13.9	-3.1	9.6
1986	-9.2	-6.6	-15.6	0.7	11.1
1987	6.1	2.1	13.0	3.2	-8.5

1/ Since December 1985, Navy data partly estimated due to change in reporting method.

e Estimate.

Note: Data include all appropriated expenditures for military and civilian payrolls, services, supplies, and construction. Excludes dependent allotments, retired military pay, and non-appropriated funds for exchanges, clubs, special services, etc.

Source: Quarterly reports from armed forces, compiled by DBED.

Table 2-3
DEFENSE EXPENDITURES BY CATEGORY: 1980 TO 1987

[Millions of dollars]

Year or quarter	All categories	Military payroll 1/	Civilian payroll	Supplies equipment services
1980	1,317.4	533.7	418.8	365.0
1981	1,449.3	612.8	450.7	385.9
1982	1,693.4	716.8	508.6	468.0
1983	1,848.2	793.8	558.2	496.2
1984	1,867.2	828.8	582.5	455.9
1985	1,965.4	839.9	611.4	514.1
1986	1,784.9	823.0	601.5	360.4
1987 (estimate)	1,893.1	861.5	576.0	455.5
	Percent change from same period in previous year			
1981	10.0	14.8	7.6	5.7
1982	16.8	17.0	12.8	21.3
1983	9.1	10.7	9.8	6.0
1984	1.0	4.4	4.4	-8.1
1985	5.3	1.3	5.0	12.8
1986	-9.2	-2.0	-1.6	-29.9
1987	6.1	4.7	-4.2	26.3

1/ Since December 1985, Navy data partly estimated due to change in reporting method.

Note: Data include all appropriated expenditures for military and civilian payrolls, services, supplies, and construction. Excludes R&R expenditures, dependent allotments, retired military pay, and non-appropriated funds for exchanges, clubs, special services, etc.

Source: Quarterly reports from armed forces, compiled by DBED.

Table 2-4
DEPARTMENT OF DEFENSE PERSONNEL, MILITARY AND CIVILIAN, BY LOCATION: SEPTEMBER 30, 1986

Installation or geographic area	Total	Military personnel 1/	Civilian personnel 2/
State total	64,921	44,168	20,753
Aiea	976	706	270
Barbers Point NAS	2,278	1,888	390
Ford Island	437	400	37
Fort Shafter	2,013	-	2,013
Halawa Heights	189	155	34
Hickam AFB	8,680	6,463	2,217
Honolulu	2,466	2,077	389
Kaneohe	8,336	7,642	694
Kapalama	273	30	243
Kauai	220	130	90
Kunia	1,454	1,417	37
Lualualei	480	221	259
Pearl Harbor	18,059	7,294	10,765
Schofield Barracks	14,421	13,267	1,154
Tripler Army Medical Center	1,139	10	1,129
Wahiawa	814	612	202
Waialua	557	521	36
Wheeler AFB	1,633	1,143	490
Other	496	192	304

1/ Active duty. Navy figure is limited to shore-based personnel and excludes personnel afloat and temporary shore-based.

2/ Direct hire.

Source: U.S. Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, Department of Defense Distribution of Personnel by State and by Selected Locations, September 30, 1986, p. 28.

Table 2-5
RESIDENT POPULATION, BY MILITARY STATUS: 1970 TO 1987

[Excludes visitors present but includes residents temporarily absent]

Date	Total resident population	Armed forces 1/	Civilian population		
			All civilians	Military dependents 2/	Not military dependents
1970: April 1	769,913	55,142	714,771	61,858	652,913
July 1	776,000	53,200	722,800	57,800	665,000
1971: July 1	801,000	50,800	750,200	62,200	688,000
1972: July 1	828,000	52,000	776,000	66,200	709,800
1973: July 1	851,000	58,100	792,900	70,300	722,600
1974: July 1	867,000	57,500	809,500	68,300	741,200
1975: July 1	884,000	58,900	825,100	63,700	761,400
1976: July 1	902,000	57,800	844,200	67,000	777,200
1977: July 1	916,000	56,500	859,500	65,000	794,500
1978: July 1	929,000	58,300	870,700	61,100	809,600
1979: July 1	950,000	57,900	892,100	64,500	827,600
1980: April 1	964,691	57,056	907,635	64,023	843,612
July 1	968,900	57,900	911,000	64,100	846,900
1981: July 1	980,200	56,600	923,600	64,300	859,300
1982: July 1	997,600	54,900	942,700	66,700	876,000
1983: July 1	1,018,500	55,200	963,400	66,300	897,100
1984: July 1	1,035,800	57,300	978,500	67,100	911,400
1985: July 1	1,051,100	56,400	994,700	64,300	930,500
1986: July 1	1,064,700	58,100	1,006,600	66,200	940,400
1987: July 1 3/	1,082,500	58,100	1,024,400	64,900	959,500

1/ July 1 figures are the estimates prepared by the U.S. Bureau of the Census for use in State population estimation, and differ somewhat from the data compiled by the Hawaii State Department of Business and Economic Development (and published annually in Military Personnel and Dependents in Hawaii). July 1 data are rounded to the nearest 100 and may not add due to rounding. April 1 data are census counts.

2/ Dependents living in Hawaii, regardless of location of family head.

3/ Provisional estimates.

Source: Federal-State Cooperative Program for Local Population Estimates.

Table 2-6

CIVILIAN EMPLOYMENT IN THE AIR FORCE, ARMY, AND NAVY: ANNUAL AVERAGES, 1973 TO 1987

[Millions of dollars]

Year	Total	Air Force	Army	Navy
1973	20,600	3,300	6,050	11,250
1974	20,200	3,300	5,700	11,200
1975	19,700	3,300	5,300	11,100
1976	19,200	3,200	4,950	11,050
1977	19,000	3,050	4,750	11,200
1978	19,100	2,850	4,500	11,750
1979	18,850	2,750	4,250	11,850
1980	18,700	2,650	4,100	11,950
1981	19,400	2,600	4,300	12,500
1982	20,400	2,650	4,650	13,100
1983	20,850	2,650	4,850	13,350
1984	20,600	2,650	5,000	12,950
1985	20,750	2,650	5,400	12,700
1986	20,400	2,650	5,600	12,150
1987	20,050	2,550	5,600	11,900

Source: Hawaii State Department of Business and Economic Development, The State of Hawaii Data Book, 1987. (Data from Hawaii State Department of Labor and Industrial Relations, Labor Force Data Book (March 1978), as revised annually through April 1988.)

the Coast Guard and the active military contingent in the State, the total defense sector payroll was $1.4 billion in 1987, representing approximately 8 percent of the total personal income received by Hawaii's residents.

The impact on the consumer sector in demand for goods and services is quite substantial because uniformed personnel and their dependents in Hawaii represent 11 percent of the total resident population. Apart from the purchases by military personnel and their dependents, the purchases by contracting offices of the Navy, Marine Corps, Air Force, Army, and Coast Guard ($456 million in 1987) have significant impacts on local industries and suppliers. The Department of Defense contracts for the local purchase of military jet fuels for the Air Force and Navy, and diesel fuel for the Navy and Coast Guard vessels stationed in Hawaii and vessels in Asian ports several thousand miles from Pearl Harbor. The Pacific Resources, Inc., and Chevron refineries at Barbers Point on Oahu sell a significant portion of their manufactured petroleum products to the military.

While petroleum products may represent a large proportion of the total consumables purchased by the military in Hawaii on a regular basis, there are hundreds of smaller contracts for the repair and maintenance of facilities at Schofield Barracks, Pearl Harbor Naval Shipyard, Hickam Air Force Base, Wheeler Air Force Base, and Kaneohe Marine Corps Air Station. Another sector of the military market is the food and beverage requirements of the several dozen mess halls and flight kitchens operated for enlisted personnel and officers on flight duty status. Many small suppliers of meats and poultry, produce and fruits, dairy products, bakery items, nonalcoholic beverages, and cooking supplies include the military in their institutional sales and deliveries.

In addition to the purchases through appropriated funds, certain military facilities are supported solely by the expenditures of active and retired military personnel and their dependents. These facilities include commissaries, post exchanges, officer and enlisted clubs, food services, packaged liquor stores, gasoline service stations, and vending outlets. In 1986, these retail outlets reported sales of $454 million.

Civilian Federal Agency Activity in Hawaii

While civilian Federal agencies employed only about 38 percent of all Federal workers in the State in 1987 (about 12,300 persons), those agencies account for 57 percent of total Federal expenditures in Hawaii. Civilian agencies primarily serve as the conduit for grants and direct payments to individuals. As data in Table 2-7 show, wages, salaries and procurement costs amounted to only about 11 percent of total civilian agency expenditures in FY 1986. The lion's share of civilian agency expenditures (89 percent) was in the form of grants-in-aid (22 percent), and direct payments to individuals (66 percent), including Social Security, Medicare and veterans benefits.

Current Challenges and Prospects

A primary characteristic of defense expenditures is that they are determined in relation to national security needs and not primarily by domestic economic conditions. This fact has, in the past, provided a partial buffer between Hawaii's economy and economic conditions nationally and internationally. For instance, in 1982 while the Mainland and worldwide recession resulted in a decline in overall business transactions in Hawaii, defense activity in the State countered this trend with a 16.8 percent increase in expenditures. Civilian agency Federal expenditures also tend to reflect political decisions in Washington,

Table 2-7
CIVILIAN FEDERAL AGENCY EXPENDITURES IN HAWAII, BY TYPE: FY 1984 TO FY 1986

[Millions of dollars and percent]

Type of expenditure	FY 1984	FY 1985	FY 1986	
			Expenditures	Percent of total expenditures
All expenditures 1/	2,030.4	2,161.8	2,310.9	100.0
Grants-in-aid	463.4	458.5	496.1	21.5
Direct payments	1,371.1	1,492.6	1,566.6	67.8
Retirement 2/	804.0	886.6	927.7	40.1
Medicare	169.2	190.4	206.0	8.9
Veterans	50.5	50.5	52.3	2.6
Other	374.4	365.1	380.6	16.5
Employees wages and salaries	155.1	165.7	192.2	8.3
Postal service	77.3	77.4	82.9	3.6
All other	84.8	88.3	109.4	4.7
Purchase of goods and serv.	40.8	45.0	56.0	2.4
Postal service	8.7	9.0	10.0	0.4
All others	32.1	35.9	46.1	2.0

1/ These data differ slightly from the totals in Table 1 because of different sources and time periods for the information.

2/ Includes social security, Federal retirement, and military retirement payments.

Source: U.S. Bureau of the Census, Federal Expenditures by State for Fiscal Year 1984 (1985 and 1986).

D.C., rather than conditions in the market place. Thus, in the recession year of 1982, civilian agency expenditures actually grew an estimated 10.6 percent. The dollars injected into Hawaii's economy by defense and nondefense agencies during the last recession provided welcomed support for the State's economy to counter weaknesses and declines in other industries.

The stabilizing quality of Federal expenditures, especially military facilities and Department of Defense payrolls, have long appealed to State economic development agencies and business associations around the nation. Any proposed selection of a location for a newly commissioned unit or naval task force immediately stirs up competition among prospective states.

The challenge arising from the intensifying competition for defense dollars lies in providing reasonable housing, quality education, and other inducements together with effective monitoring by the State's Congressional Delegation to insure an equitable share of these budgeted appropriations. Whether it be battlegroups, air facilities, and their active squadrons, the division-occupied Army base, or combinations of all three as found on Oahu, intense competition can be expected to characterize the activities of economic development agencies of other states and municipalities.

Despite the persistent challenges to maintaining Hawaii's current share of defense dollars, the prospects for the defense industry in Hawaii remain promising. Hawaii has several important advantages for the military: a strategic location in the Pacific; the advanced development of the Pearl Harbor complex; good terrain for amphibious and jungle warfare training; and an impressive investment in harbor, air base, and Army housekeeping facilities.

There are also some disadvantages: the high cost of living and housing, limited land available for full-scale infantry and tank maneuvers, and the periodic conflict of military requirements and civilian desires. Yet as severe as these conflicts have appeared to be in the past, compromises have invariably been worked out.

Projections

The future course of Federal expenditures will likely depend on a minimum of two factors: long-term growth of the U.S. economy and efforts to control U.S. Government deficits through a reduction in spending. For the prospects concerning defense expenditures, an additional two factors come into play: whether or not spending cuts will fall primarily on defense activities and the need for forward forces in the Pacific which would favor Hawaii's strategic position.

Based on the best information available, the UCLA National Business Forecast has projected the U.S. budget and major components through the 1989 fiscal year (Table 2-8). The projections indicate a budget that no longer emphasizes national defense spending over domestic spending.

On the other hand, personnel, facilities, and maintenance are generally the more stable elements of defense spending, while the procurement of new weapons is more volatile and susceptible to changes in budget priorities. Because defense expenditures in Hawaii are primarily personnel and facilities oriented, and are not involved with the development or production of new weapons, the State will probably be less sensitive to periodic defense budget cuts as long as its strategic importance continues. Hawaii, however, does have a stake in other areas of defense budgeting besides personnel and facilities. Pearl Harbor Navy Shipyard--a major employer of Hawaii's civilian defense workers--is, for instance, engaged in the more complex job of upgrading the technology of ships as well as simple repair and maintenance.

Table 2-8
ACTUAL AND PROJECTED EXPENDITURES AND RECEIPTS OF THE FEDERAL GOVERNMENT: 1986 TO 1989

[Fiscal year and current dollars unless indicated otherwise]

Budget category	Billions of dollars				Percent change from previous year			
	1987a	1988	1989	1990	1987	1988	1989	1990
Total expenditures	1,053.0	1,108.5	1,160.5	1,206.4	2.6	5.3	4.7	4.0
Goods and services	374.3	388.4	395.3	403.2	1.5	3.8	1.8	2.0
National defense	290.0	298.5	298.1	300.7	5.4	2.9	-0.1	0.8
Other	84.3	89.9	97.2	102.5	-9.7	6.6	8.1	5.5
Transfer payments	409.5	436.8	472.3	496.7	3.7	6.7	8.1	5.2
U.S. Citizens	398.1	423.7	459.1	483.2	4.6	6.4	8.4	5.2
Foreign aid	11.4	13.1	13.2	13.5	-19.7	14.9	0.8	2.3
Grants to State and local government	103.6	107.0	112.6	117.7	-3.3	3.3	5.2	4.5
Interest	140.0	147.3	152.2	162.2	4.1	5.2	3.3	6.6
Net subsidy to government enterprise	25.7	28.9	28.1	26.6	18.4	12.5	-2.8	-5.3
Total receipts	894.4	932.3	977.1	1,078.0	9.7	4.2	4.8	10.3
Surplus (+) or deficit (-)	-158.6	-176.2	-183.4	-128.4	-24.9	11.1	4.1	-30.0
GNP Assumption (calendar year)								
Current dollars	4,487.7	4,646.3	4,957.5	5,313.8	5.6	3.5	6.7	7.2
Constant (1982) dollars	3,820.3	3,832.7	3,949.9	4,066.6	2.9	0.3	3.1	3.0

a Actual.

Source: UCLA Business Forecasting Project, The UCLA National Business Forecast (March 1988).

The level of civilian Federal agency expenditures in Hawaii, as indicated earlier, are heavily influenced by the amounts of grants-in-aid to State and local governments and direct payments to individuals (which are predominantly retirement benefits). The aging of the population in Hawaii, as elsewhere, should insure a growing inflow of retirement dollars through the Federal government. Civilian Federal government direct payments other than retirement were the subject of severe growth limitations during most of the 1980s. Further, significant cuts will be very difficult to achieve politically. However, given the seriousness of the Federal deficit problem facing the Administration and Congress, it is difficult to predict at this time how restrictive future budgets will be, or whether tax increases may eventually be adopted to narrow the deficit.

DBED's recently revised long-range economic and population projections for Hawaii (series M-K) forecast a gradual increase in the overall number of Federal civilian jobs (Table 2-9).

This projection is based on the assumption of an average 1.5 percent per year growth of defense expenditures in Hawaii over the period, some growth in civilian agency employment as Hawaii's economy grows, and no significant changes in defense or domestic spending policies at the national level. Given the many areas of uncertainty, the status, trends, and determinants of Federal expenditures in Hawaii need to be monitored and reevaluated frequently.

Table 2-9
PROJECTED TOTAL AND FEDERAL GOVERNMENT CIVILIAN JOBS IN HAWAII: 1985 TO 2010

[Thousands]

Category	1985	1990	1995	2000	2005	2010
Total civilian jobs	493	557	610	657	695	729
Federal civilian jobs	34	34	35	35	36	36

Source: Hawaii State Department of Business and Economic Development, Revised Long-Range Economic and Population Projections to 2010: State of Hawaii (Series M-K), Preliminary Report, January 1988, p. 14, Table 7.

3. Income and Prices

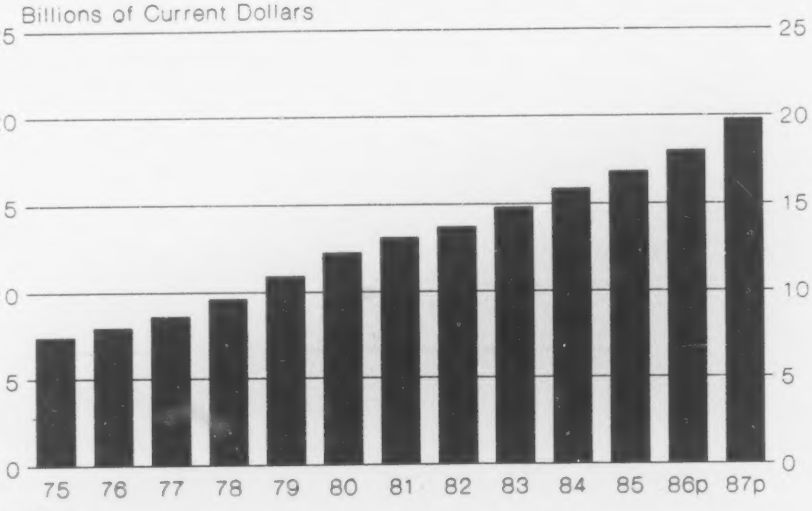
Preliminary figures show that real Gross State Product (GSP) increased at an annual rate of 5.2 percent during 1987. Hawaii's GSP, the most comprehensive measure of the State economy, is the market value of all goods and services produced in the State. The GSP accounts used to measure State's income and output have recently undergone extensive revision and improvements. The revised 1958 to 1987 series for total and per capita GSP in both current and constant 1982 dollars are shown in Table 3-4. Figure 3-3 compares the growth rate of GSP to its national counterpart Gross National Product in constant 1982 dollars. Hawaii's GSP is expected to grow at an average annual rate of 2.5 percent over the next four years. A detailed report on Hawaii's GSP accounts will be issued in the near future.

The Honolulu Consumer Price Index (CPI-U) increased 6.0 percent during the second half of 1987, following a rise of 4.0 percent in the first half of 1987. This represents a 5.0 percent increase in the Honolulu CPI-U for 1987 as a whole compared to a 2.4 percent increase for all of 1986. The U.S. CPI-U increased 3.6 for all of 1987, compared to a 1.9 percent increase in 1986. Although all major categories of Consumer Price Index increased in the second half of 1987, the higher cost of housing and transportation costs were major factors in the rise of the overall Honolulu price index. With the February 1988 release of data, the Bureau of Labor Statistics has changed the base reference period of the Honolulu indexes to 1982-84 = 100 from the previous base of 1967.

Preliminary data for personal income in Hawaii showed a 6.8 percent increase for 1987 compared to the National increase of 5.8 percent. Among Hawaii's major industries, personal income in the construction industry exhibited the largest increase, up 16 percent. Revised personal income data will be available in August and will likely show stronger Hawaii gains in income for 1987.

Figure 3-1

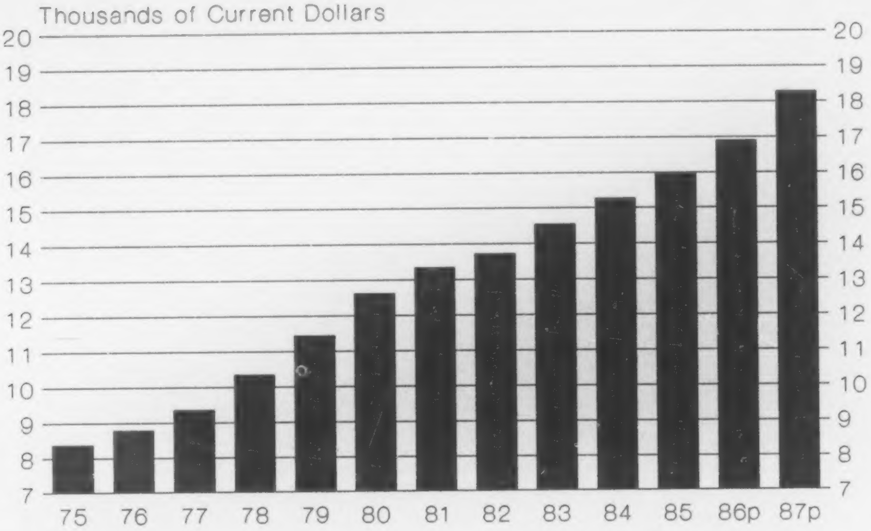
HAWAII'S GROSS STATE PRODUCT



p preliminary
SOURCE: Department of Business and Economic Development

Figure 3-2

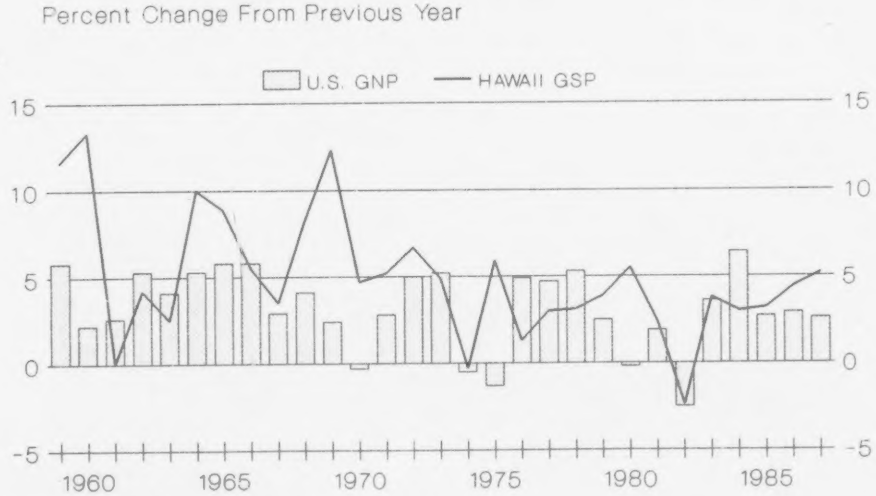
PER CAPITA GROSS STATE PRODUCT



p preliminary
SOURCE: Department of Business and Economic Development

Figure 3-3

GROWTH IN HAWAII AND U.S. REAL GROSS PRODUCT: 1959 TO 1987



SOURCE: Department of Business and Economic Development

Table 3-1
TOTAL AND PER CAPITA PERSONAL INCOME, UNITED STATES AND HAWAII: 1969 TO 1987

Year	Total personal income (millions of dollars)		Per capita personal income (dollars)		Hawaii per capita income as a percentage of U.S.
	United States	Hawaii	United States	Hawaii	
1969	766,522	3,277	3,808	4,411	116
1970	825,534	3,772	4,051	4,944	122
1971	888,536	4,060	4,296	5,129	119
1972	976,181	4,473	4,665	5,468	117
1973	1,095,289	4,967	5,182	5,901	114
1974	1,204,899	5,702	5,648	6,645	118
1975	1,308,482	6,159	6,073	7,038	116
1976	1,447,002	6,670	6,651	7,474	112
1977	1,602,863	7,210	7,294	7,873	108
1978	1,806,968	8,043	8,136	8,660	106
1979	2,028,510	9,031	9,033	9,506	105
1980	2,254,076	10,279	9,919	10,617	107
1981	2,514,231	11,051	10,949	11,275	103
1982	2,663,432	11,732	11,480	11,760	102
1983	2,834,385	12,875	12,098	12,641	104
1984	3,101,163	13,628	13,114	13,157	100
1985	3,320,346	14,555	13,908	13,847	100
1986	3,528,589	15,572	14,636	14,625	100
1987	3,733,719	16,634	15,340	15,366	100
	Percent change from previous year				
1970	7.7	15.1	6.4	12.1	5.4
1971	7.6	7.6	6.0	3.7	-2.2
1972	9.9	10.2	8.6	6.6	-1.8
1973	12.2	11.0	11.1	7.9	-2.8
1974	10.0	14.8	9.0	12.6	3.3
1975	8.6	8.0	7.5	5.9	-1.5
1976	10.6	8.3	9.5	6.2	-3.0
1977	10.8	8.1	9.7	5.3	-3.9
1978	12.7	11.6	11.5	10.0	-1.4
1979	12.3	12.3	11.0	9.8	-1.1
1980	11.1	13.8	9.8	11.7	1.7
1981	11.5	7.5	10.4	6.2	-3.8
1982	5.9	6.2	4.8	4.3	-0.5
1983	6.4	9.7	5.4	7.2	2.0
1984	9.4	5.8	8.4	4.1	-4.0
1985	7.1	6.8	6.1	5.2	-0.8
1986	6.3	7.0	5.2	5.6	0.4
1987	5.8	6.8	4.8	5.1	0.2

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Electronic Data Distribution System release April 1988.

Table 3-2
TOTAL AND PER CAPITA DISPOSABLE PERSONAL INCOME UNITED STATES AND HAWAII: 1969 TO 1987

Year	Disposable personal income (millions of dollars)		Per capita income (dollars)		Hawaii per capita income as a percentage of U.S.
	United States	Hawaii	United States	Hawaii	
1969	650,969	2,747	3,234	3,698	114
1970	709,963	3,191	3,484	4,182	120
1971	771,813	3,478	3,732	4,394	118
1972	834,764	3,780	3,989	4,620	116
1973	943,848	4,204	4,466	4,993	112
1974	1,033,682	4,861	4,845	5,665	117
1975	1,138,354	5,374	5,283	6,141	116
1976	1,248,776	5,783	5,740	6,480	113
1977	1,375,307	6,213	6,258	6,784	108
1978	1,546,470	6,898	6,963	7,427	107
1979	1,724,566	7,711	7,680	8,116	106
1980	1,914,331	8,776	8,424	9,065	108
1981	2,121,830	9,418	9,240	9,608	104
1982	2,255,123	10,213	9,721	10,238	105
1983	2,424,880	11,100	10,350	10,898	105
1984	2,662,051	11,886	11,257	11,475	102
1985	2,835,626	12,574	11,878	11,962	101
1986	3,017,588	13,444	12,516	12,626	101
1987	3,170,278	14,277	13,025	13,189	101
	Percent change from previous year				
1970	9.1	16.2	7.7	13.1	5.0
1971	8.7	9.0	7.1	5.1	-1.9
1972	8.2	8.7	6.9	5.1	-1.6
1973	13.1	11.2	12.0	8.1	-3.5
1974	9.5	15.6	8.5	13.5	4.6
1975	10.1	10.6	9.0	8.4	-0.6
1976	9.7	7.6	8.7	5.5	-2.9
1977	10.1	7.4	9.0	4.7	-4.0
1978	12.4	11.0	11.3	9.5	-1.6
1979	11.5	11.8	10.3	9.3	-0.9
1980	11.0	13.8	9.7	11.7	1.8
1981	10.8	7.3	9.7	6.0	-3.4
1982	6.3	8.4	5.2	6.6	1.3
1983	7.5	8.7	6.5	6.4	0.0
1984	9.8	7.1	8.8	5.3	-3.2
1985	6.5	5.8	5.5	4.2	-1.2
1986	6.4	6.9	5.4	5.6	0.2
1987	5.1	6.2	4.1	4.5	0.4

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Electronic Data Distribution System release April 1988.

Table 3-3
PERSONAL INCOME BY MAJOR SOURCES: 1985 to 1987

[In millions of dollars and percent]

Item	1985	1986	1987	Growth rate from previous period	
				1985-86	1986-87
By type:					
Wage and salary disbursements	9,169	9,756	10,507	6.4	7.7
Other labor income	773	827	901	7.0	9.0
Proprietors income	1,050	1,198	1,251	14.0	4.5
Farm	118	159	66	34.0	-58.4
Nonfarm	932	1,040	1,185	11.6	14.0
By industry:					
Farm	270	310	222	14.8	-28.2
Nonfarm	10,722	11,471	12,437	7.0	8.4
Private	7,300	7,948	8,757	8.9	10.2
Agriculture, forestry, fish	48	55	57	14.0	4.1
Mining	24	25	33	5.3	32.3
Construction	659	760	883	15.3	16.1
Manufacturing	522	551	577	5.5	4.7
Transp., comm., utilities	904	975	1,097	7.9	12.5
Wholesale trade	442	463	494	4.7	6.6
Retail trade	1,258	1,332	1,484	5.8	11.4
Finance, insur., real est.	742	833	939	12.3	12.7
Services	2,702	2,956	3,195	9.4	8.1
Government and govt. enterpr.	3,423	3,523	3,681	2.9	4.5
Federal, civilian	964	950	978	-1.4	2.9
Federal military	1,267	1,298	1,348	2.4	3.9
State and local	1,193	1,276	1,355	7.0	6.2
Derivation of personal income					
Total earnings	10,992	11,781	12,659	7.2	7.5
Less: Personal contributions for social insurance	673	726	798	7.9	9.9
Net earnings	10,319	11,054	11,861	7.1	7.3
Plus: Dividends, interest, and rent	2,179	2,343	2,466	7.5	5.2
Plus: Transfer payments	2,058	2,174	2,307	5.7	6.1
Personal income	14,555	15,574	16,634	7.0	6.8

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Electronic Data Distribution System release April 20, 1988.

Table 3-4
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS (CPI-U) FOR SELECTED ITEMS FOR HONOLULU: 1980 TO 1987

[1982-84 = 100]

Period 1/	All items	Food & beverage	Housing 2/	Apparel and upkeep	Transportation	Medical care	Entertainment	Other
Honolulu:								
1980	83.0	84.2	83.2	89.8	86.6	73.1	78.2	73.3
1981	91.7	92.6	92.3	94.5	95.7	81.8	87.2	81.5
1982	97.2	96.9	98.0	98.4	99.0	91.6	95.7	92.0
1983	99.3	99.5	98.9	101.4	98.2	101.1	100.0	101.4
1984	103.5	103.6	103.1	100.2	102.9	107.3	104.3	106.6
1985	106.8	107.8	106.0	99.6	104.9	113.2	111.9	112.5
1986..........	109.4	110.0	108.4	99.8	105.2	122.3	113.2	119.6
1987	114.9	114.1	115.0	102.5	109.7	127.9	118.6	129.7
1986:								
1st half...	108.9	108.8	108.0	99.4	106.0	120.2	115.5	116.6
2nd half .	109.9	111.2	108.9	100.2	104.4	124.5	110.9	122.5
1987:								
1st half...	113.3	113.3	113.4	101.0	107.3	126.5	116.3	127.0
2nd half .	116.5	115.0	116.5	104.1	112.1	129.2	120.9	132.4
% increase (Honolulu):								
1980-81	10.5	10.0	10.9	5.2	10.5	11.9	11.5	11.2
1981-82	6.0	4.6	6.2	4.1	3.4	12.0	9.7	12.9
1982-83	2.2	2.7	0.9	3.0	-0.8	10.4	4.5	10.2
1983-84	4.2	4.1	4.2	-1.2	4.8	6.1	4.3	5.1
1984-85	3.2	4.1	2.8	-0.6	1.9	5.5	7.3	5.5
1985-86	2.4	2.0	2.3	0.2	0.3	8.0	1.2	6.3
1986-87	5.0	3.7	6.1	2.7	4.3	4.6	4.8	8.4
1st half ..	4.0	4.1	5.0	1.6	1.2	5.2	0.7	8.9
2nd half .	6.0	3.4	7.0	3.9	7.4	3.8	9.0	8.1

1/ Beginning with 1987, the Honolulu CPI-U is available semi-annually only.

2/ Change in calculation in 1983--housing costs measured in rental equivalence (what owners would have to pay if they rented their homes).

Source: U.S. Department of Labor, Bureau of Labor Statistics.

Table 3-5
GROSS STATE PRODUCT AND PER CAPITA GROSS STATE PRODUCT: 1975 TO 1987

[Dollars]

Year	Gross state product		Per capita gross state product	
	Current dollars	1982 dollars	Current dollars	1982 dollars
1975	7,411,268	11,601,888	8,363	13,092
1976	7,933,371	11,747,134	8,774	12,992
1977	8,597,376	12,105,930	9,363	13,184
1978	9,627.637	12,491,630	10,335	13,409
1979	10,906,430	12,985,191	11,441	13,621
1980	12,225,729	13,700,639	12,619	14,141
1981	13,078,262	14,028,215	13,343	14,312
1982	13,691,047	13,691,047	13,725	13,725
1983	14,811,784	14,207,807	14,541	13,948
1984	15,826,526	14,635,599	15,276	14,127
1985	16,813,829	15,047,567	15,991	14,311
1986 p	17,995,800	15,703,100	16,902	14,749
1987 p	19,779,500	16,516,300	18,272	15,258
	Percent change from previous year			
1975	(NA)	(NA)		
1976	7.0	1.3	4.9	-0.8
1977	8.4	3.0	6.7	1.5
1978	12.0	3.1	10.4	1.7
1979	13.3	3.9	10.7	1.6
1980	12.1	5.5	10.3	3.8
1981	7.0	2.4	5.7	1.2
1982	4.7	-2.4	2.9	-4.1
1983	8.2	3.8	5.9	1.6
1984	6.9	3.0	5.1	1.3
1985	6.2	3.2	4.7	1.3
1986	7.0	4.4	5.7	3.1
1987	9.9	5.2	8.1	3.5

p Preliminary.
Source: DBED State of Hawaii Data Book 1987, Table 404 as updated.

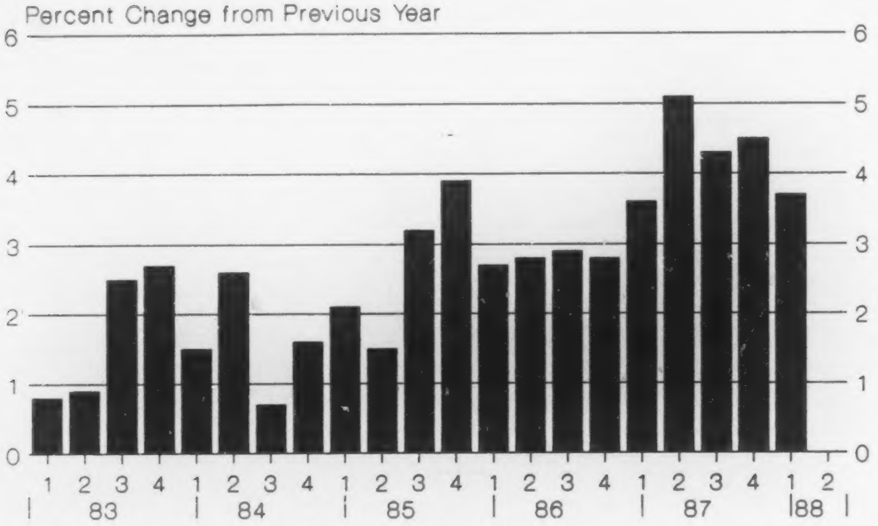
4. Employment

Preliminary data for 1987 showed that total number of jobs in the State exceeded one-half million for the first time on an annual basis. Job growth showed a robust 4.5 percent increase over 1986, the best increase since 1978. Surprisingly, diversified agriculture showed the sharpest job growth in 1987, up 17.1 percent from 1986 in terms of wage and salary workers and 15.6 percent in self-employment. Construction showed the next highest growth at 12.3 percent over 1986. However, in terms of numbers, the service industry contributed one-third of all new jobs in 1987, or 7,600 of the 22,050 overall increase in jobs. Non-agricultural wage and salary jobs showed continued growth in 1987 with Kauai County showing the largest increase of 7.7 percent.

The State's unemployment rate declined to 3.8 percent in 1987, the lowest annual rate since the current method of measuring unemployment was derived in 1970. All counties showed lower unemployment rates in 1987. At 5.7 percent, Hawaii County showed the highest rate of unemployment in 1987, but this was 2 percentage points below the 1986 level. By March 1988, the unemployment rate in the State had fallen to a record low of 3.1 percent. While the lower unemployment rate is certainly welcome, it will also likely exert upward pressure on wage rates in the State as the pool of available labor shrinks.

Figure 4-1

GROWTH IN TOTAL JOBS



SOURCE: DBED, Based on Data from the Dept. of Labor and Industrial Relations

Table 4–1
TOTAL JOBS: 1980 TO 1988

		Nonagriculture			Agriculture			
Year	Total jobs1/	Total	Wage & salary	Self-employed	Total	Wage & salary	Self-employed	Labor disputes
1980	448,150	432,400	404,100	28,300	15,400	10,800	4,600	500
1981	449,900	433,950	404,800	29,150	15,850	11,500	4,350	50
1982	446,050	430,700	399,400	31,300	15,250	11,300	4,000	100
1983	453,750	438,500	406,200	32,300	15,100	11,200	3,900	150
1984	461,000	446,100	412,650	33,450	14,450	10,800	3,650	450
1985	473,150	459,150	425,750	33,400	13,900	10,400	3,500	100
1986	486,850	473,300	438,550	34,750	13,350	10,150	3,200	200
1987 (p)	508,900	494,600	458,950	35,650	14,250	10,550	3,700	50
1987 (p):								
1st Q	496,050	482,700	451,900	30,800	13,350	10,000	3,350	–
2nd Q	508,450	494,250	458,500	35,750	14,150	10,500	3,650	50
3rd Q	509,900	494,450	458,200	36,250	15,400	11,300	4,100	50
4th Q	517,700	503,700	467,250	36,450	13,950	10,350	3,600	50
1988 (p)								
1st Q	514,300	500,800	465,700	35,100	13,450	10,000	3,450	50
	Percent change from the same period in previous year							
1980	3.2	3.4	2.6	16.2	1.1	0.5	2.2	-28.6
1981	0.3	0.4	0.2	3.0	2.9	8.4	-5.4	-90.0
1982	-0.9	-0.7	-1.3	7.4	-3.8	-2.2	-9.2	100.0
1983	1.7	1.8	1.7	3.2	-1.3	-0.9	-1.3	50.0
1984	1.6	1.7	1.6	3.6	-4.0	-3.6	-6.4	200.0
1985	2.6	2.9	3.2	-0.2	-3.8	-3.5	-4.4	-77.8
1986	2.9	3.1	3.0	4.0	-4.0	-2.4	-8.6	100.0
1987 (p)	4.5	4.5	4.6	2.6	6.7	3.9	15.6	-75.0
1987 (p):								
1st Q	3.6	3.6	4.4	-6.8	4.2	1.5	11.7	0.0
2nd Q	5.1	5.0	5.2	1.9	10.7	5.5	28.1	0.0
3rd Q	4.3	4.2	4.6	-0.1	7.7	4.1	18.8	0.0
4th Q	4.5	4.5	4.4	6.1	3.3	3.5	2.9	-91.7
1988 (p):								
1st Q	3.7	3.7	3.1	14.0	0.7	-0.2	2.5	0.0

p Preliminary.

1/ Total of wage and salary jobs and self-employed in agricultural and nonagricultural industries plus those jobs involved in labor disputes.

Source: Hawaii State Department of Labor and Industrial Relations.

Table 4-2
NUMBER OF JOBS, BY INDUSTRY: 1986 TO 1988

Series	1986	1987	(Jan. - March) 1988	Percent change from previous year 1986	1987	1988
Total jobs 1/	486,850	508,900	514,300	2.9	4.5	3.7
Non-agricultural wage and salary jobs	438,550	458,950	465,700	3.0	4.6	3.1
Construction	18,650	20,950	20,100	8.7	12.3	-2.4
Manufacturing	22,050	22,100	21,800	0.7	0.2	-0.2
Durable goods	3,750	3,950	4,000	1.4	5.3	5.3
Nondurable goods	18,250	18,150	17,800	0.0	-0.5	-1.2
Food processing	10,100	10,100	9,800	0.0	0.0	-1.2
Sugar processing	3,300	3,100	3,050	-4.3	-6.1	-5.2
Pineapple processing	2,000	2,050	1,850	5.3	2.5	3.7
Other food processing	4,850	4,950	4,900	3.2	2.1	1.0
Transp. commun., utilities	34,200	36,650	36,650	3.0	7.2	2.4
Trade	117,950	123,350	125,000	2.0	4.6	3.5
Wholesale	19,550	20,400	20,500	0.0	4.3	2.8
Retail	98,400	102,950	104,450	2.4	4.6	3.7
Finance, insur., real estate	33,150	33,950	34,250	3.9	2.4	2.2
Services	118,750	126,350	129,550	5.4	6.4	4.8
Hotels	29,250	31,000	32,650	0.9	6.0	7.0
Government	93,850	95,600	98,350	0.6	1.9	2.7
Federal	32,100	32,350	32,600	-0.9	0.8	1.7
State	48,600	49,900	52,400	2.5	2.7	2.8
Local	13,150	13,400	13,400	-2.6	1.9	4.6
Agriculture (wage & salary)	10,150	10,550	10,000	-2.4	3.9	-0.2
Sugar	4,000	3,800	3,700	-2.4	-5.0	-3.5
Pineapple	2,050	1,900	1,600	5.1	-7.3	-5.8
Diversified agriculture	4,100	4,800	4,700	-5.7	17.1	5.2
Nonagric. self-employed 2/	34,750	35,650	35,100	4.0	2.6	14.0
Agricultural self-employed 2/	3,200	3,700	3,450	-8.6	15.6	2.5
Labor disputes	200	50	50	100.0	-75.0	0.0

1/ Total of nonagricultural and agricultural wage and salary, self-employed, and jobs involved in labor disputes.

2/ Self-employed includes unpaid family workers and domestics.

Source: Hawaii State Department of Labor and Industrial Relations.

Table 4–3
NON-AGRICULTURAL WAGE AND SALARY JOBS, BY COUNTY: 1980 TO 1988

Year	State	City & County of Honolulu	Hawaii County	Kauai County	Maui County
1980	404,100	333,050	28,450	15,150	27,500
1981	404,800	332,300	28,850	15,200	28,450
1982	399,400	325,700	28,700	15,150	29,900
1983	406,200	330,100	29,350	15,700	31,050
1984	412,650	334,400	30,400	15,700	32,150
1985	425,750	342,300	32,250	16,700	34,550
1986	438,550	351,450	33,150	17,900	36,050
1987 (p)	458,950	366,150	35,100	19,250	38,400
1987 (p):					
1st Q	451,900	360,600	34,600	18,600	38,100
2nd Q	458,450	366,100	35,100	18,950	38,250
3rd Q	458,150	364,950	35,250	19,300	38,700
4th Q	467,200	372,850	35,550	20,250	38,600
1988 (p):					
1st Q	465,700	371,150	35,650	20,450	38,500
	Percent change from same period in previous year				
1980	2.6	2.2	2.9	6.1	4.3
1981	0.2	−0.2	1.4	0.6	3.5
1982	−1.3	−2.0	−0.5	−0.6	5.0
1983	1.7	1.4	2.3	3.9	4.0
1984	1.6	1.3	3.6	0.1	3.5
1985	3.2	2.4	6.0	6.1	7.4
1986	3.0	2.7	2.9	7.2	4.4
1987 (p)	4.6	4.2	5.9	7.7	6.6
1987 (p):					
1st Q	4.4	3.8	5.6	6.7	7.8
2nd Q	5.2	4.7	7.0	8.2	7.4
3rd Q	4.6	4.1	6.4	6.0	6.3
4th Q	4.4	4.1	4.5	10.1	4.8
1988 (p):					
1st Q	3.1	2.9	3.0	10.1	1.0

p Preliminary.

Source: Hawaii State Department of Labor and Industrial Relations.

Table 4–4
CIVILIAN LABOR FORCE AND EMPLOYMENT, BY COUNTY: 1980 TO 1988

[Number of persons]

Subject and year	State	City and County of Honolulu	Hawaii County	Kauai County	Maui County
Civilian labor force:					
1980	439,000	338,350	43,550	19,550	37,550
1981	451,000	345,700	45,450	20,100	39,800
1982	461,000	350,100	47,200	20,850	42,900
1983	472,000	357,100	48,350	21,650	44,850
1984	472,000	357,100	48,650	21,300	44,950
1985	479,000	359,600	50,400	22,050	46,950
1986	492,000	368,700	51,350	23,400	48,600
1987	514,000	384,100	54,150	25,000	51,750
1987: 1st Q	500,550	373,850	52,100	23,750	50,850
2nd Q	516,300	385,200	54,550	24,800	51,850
3rd Q	520,100	386,850	55,650	25,200	52,350
4th Q	523,050	390,600	54,350	26,250	51,900
1988: 1st Q	525,950	392,450	54,950	26,550	52,000
Civilian employment:					
1980	418,000	322,800	40,850	18,700	35,650
1981	427,000	328,500	42,150	18,900	37,450
1982	430,000	328,600	42,700	19,150	39,600
1983	442,000	336,550	44,050	20,000	41,450
1984	445,000	338,050	44,900	19,800	42,250
1985	452,000	341,150	46,150	20,550	44,150
1986	468,000	352,500	47,500	22,000	46,050
1987	495,000	370,600	51,050	23,900	49,450
1987: 1st Q	480,550	360,050	49,150	22,700	48,700
2nd Q	495,150	371,150	50,950	23,650	49,450
3rd Q	500,400	373,450	52,500	24,250	50,200
4th Q	503,900	377,700	51,700	25,000	49,550
1988: 1st Q	507,750	380,200	52,150	25,500	49,900

Source: Hawaii State Department of Labor and Industrial Relations.

Table 4–5

CIVILIAN UNEMPLOYED AND UNEMPLOYMENT RATE, BY COUNTY: 1980 TO 1988

Subject and year	State	City and County of Honolulu	Hawaii County	Kauai County	Maui County
Civilian unemployed (persons):					
1980	21,000	15,550	2,700	850	1,900
1981	24,000	17,150	3,300	1,150	2,350
1982	31,000	21,500	4,500	1,700	3,300
1983	30,000	20,600	4,300	1,650	3,400
1984	27,000	19,100	3,750	1,500	2,700
1985	27,000	18,450	4,250	1,500	2,800
1986	24,000	16,200	3,850	1,400	2,550
1987	20,000	13,550	3,100	1,100	2,250
1987: 1st Q	20,000	13,800	2,950	1,050	2,150
2nd Q	21,200	14,050	3,600	1,150	2,400
3rd Q	19,700	13,400	3,150	950	2,200
4th Q	19,150	12,900	2,650	1,250	2,350
1988: 1st Q	18,200	12,250	2,850	1,050	2,100
Unemployment rate (percent):					
1980	4.9	4.6	6.2	4.3	5.1
1981	5.4	5.0	7.3	5.8	5.9
1982	6.7	6.1	9.5	8.1	7.7
1983	6.5	5.8	8.9	7.7	7.6
1984	5.6	5.3	7.7	7.0	6.0
1985	5.6	5.1	8.5	6.7	5.9
1986	4.8	4.4	7.5	6.0	5.3
1987	3.8	3.5	5.7	4.4	4.4
1987: 1st Q	4.0	3.7	5.7	4.4	4.2
2nd Q	4.1	3.6	6.6	4.6	4.6
3rd Q	3.8	3.5	5.7	3.8	4.2
4th Q	3.7	3.3	4.9	4.8	4.5
1988: 1st Q	3.5	3.1	5.2	4.0	4.0

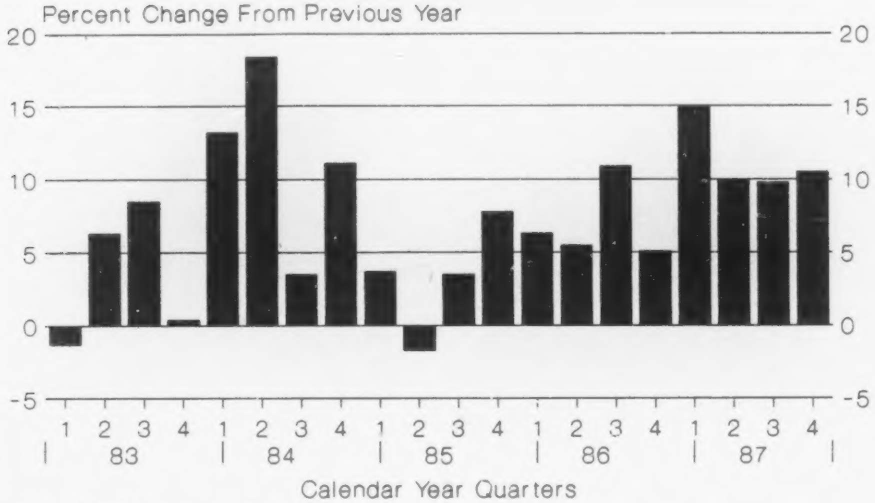
Source: Hawaii State Department of Labor and Industrial Relations.

5. Business Activity

Overall, business activity, as measured by the volume of taxable transactions subject to State excise and use taxes, increased 11.0 percent during 1987. Construction industry and tourism-related sectors such as trade, services, and hotel rentals were the major contributors to this growth.

Federal defense expenditures in the State, increased an estimated 6.1 percent in 1987. This represents a rebound from the 9.2 percent decline in 1986. The increase in 1987 defense spending was mainly due to an increase in procurement (goods and services), which increased 26 percent in 1987.

Figure 5-1
GROWTH IN TAXABLE BUSINESS TRANSACTIONS



SOURCE: DBED, Based on Data from the Dept. of Taxation

Table 5-1

VALUE OF BUSINESS TRANSACTIONS SUBJECT TO STATE EXCISE AND USE TAX: 1980 TO 1987

[Millions of dollars]

Year	Total taxable trans-actions	Selected industry transactions				
		Retailing	Services	Hotel rental	Diversified agriculture	Manu-facturing
1980	18,966.2	6,075.5	1,750.1	720.7	141.3	620.1
1981	20,903.8	6,690.7	1,792.1	759.4	173.3	615.9
1982	20,722.1	7,043.6	1,976.2	875.5	176.8	544.3
1983	21,416.8	7,458.8	2,128.5	858.2	221.6	502.3
1984	23,879.9	8,182.7	2,396.1	1,008.6	257.6	530.1
1985	24,630.3	8,605.2	2,529.7	1,153.4	251.6	538.3
1986	26,335.2	9,206.7	2,786.1	1,227.2	258.8	565.4
1987	29,232.3	10,010.4	3,057.4	1,434.8	264.2	588.3
1987: 1st Q	7,374.6	2,530.6	770.3	362.8	66.5	153.0
2nd Q	7,443.6	2,521.2	792.6	406.7	73.7	151.4
3rd Q	7,316.2	2,545.8	770.9	340.0	61.5	147.2
4th Q	7,167.8	2,412.8	723.7	325.3	62.3	136.7
	Percent change from same period in previous year					
1981	10.2	10.1	2.4	5.4	22.6	-0.7
1982	3.4	5.3	10.3	15.3	2.0	-11.6
1983	-0.9	5.9	7.7	-2.0	25.3	-7.7
1984	11.5	9.7	12.6	17.5	16.2	5.5
1985	3.1	5.2	5.6	14.4	-2.4	1.5
1986	6.9	7.0	10.1	6.4	2.9	5.0
1987	11.0	8.7	9.7	16.9	2.1	4.0
1987: 1st Q	14.9	9.9	17.9	29.2	3.4	17.3
2nd Q	10.0	4.9	12.1	12.2	18.9	-0.6
3rd Q	9.8	11.6	8.0	11.3	-7.5	4.9
4th Q	10.5	8.6	1.6	16.9	-5.6	-4.0

Note: This series derived by lagging reported excise tax base data one month to adjust for reporting delay.

Source: Hawaii State Department of Taxation.

Table 5–2
COLLECTIONS OF KEY STATE TAXES AND GENERAL FUND TAX REVENUES: 1982 TO 1988

[Thousands of dollars]

Year	General excise and use tax	Net individual income tax 1/	Net corporate income tax 2/	Tax revenues distributed to State General Fund 3/
1982	574,590	296,757	34,785	1,011,465
1983	615,536	358,072	27,960	1,109,876
1984	669,805	413,885	39,681	1,240,352
1985	707,381	446,358	44,075	1,325,791
1986	777,961	490,185	46,216	1,486,484
1987	869,039	574,729	67,272	1,731,226
1987: 1st Q	216,699	134,394	13,647	400,595
2nd Q	214,933	143,625	26,592	461,714
3rd Q	219,312	138,773	17,857	430,015
4th Q	218,095	157,937	9,176	438,903
1988: 1st Q	240,506	159,295	18,135	466,092
	Percent change from same period in previous year			
1982	−0.1	−15.1	−20.2	−5.5
1983	7.1	20.7	−19.6	9.7
1984	8.8	15.6	41.9	11.8
1985	5.6	7.8	11.1	6.9
1986	10.0	9.8	4.9	12.1
1987	11.7	17.2	45.6	16.5
1987: 1st Q	12.9	6.9	75.3	15.4
2nd Q	7.4	43.8	55.0	17.4
3rd Q	10.6	7.5	19.8	13.9
4th Q	16.2	16.5	43.9	19.1
1988: 1st Q	11.0	18.5	32.9	16.3

Note: This series represents data as reported by the Department of Taxation, without adjustment.

1/ Declaration of estimated taxes, plus payments with returns, plus withholding tax on wages, less refunds.

2/ Declaration of estimated taxes, plus payments with returns, less refunds.

3/ Excludes non-tax sources.

Source: Hawaii State Department of Taxation.

Table 5-3
DEFENSE EXPENDITURES BY SERVICE: 1980 TO 1987

[Millions of dollars]

Year or quarter	Total	Navy and Marine 1/	Army	Air Force	Coast Guard
1980	1,317.4	711.3	441.8	141.7	22.7
1981	1,449.3	770.4	493.8	158.3	26.7
1982	1,693.4	878.2	611.5	173.7	29.9
1983	1,848.2	935.9	702.7	182.6	27.0
1984	1,867.2	948.2	685.2	207.6	26.2
1985	1,965.4	955.3	780.4	201.0	28.7
1986	1,784.9	892.0	658.6	202.4	31.9
1987	1,893.1e	910.7	744.3	208.9e	29.2e
1987: 1st Q ...	444.2	214.5	172.1	49.8	7.8
2nd Q ..	453.6	230.6	159.6	55.6	7.8
3rd Q ...	495.3	226.5	211.3	51.2	6.2
4th Q ...	499.9e	239.0	201.3	52.2e	7.3e
	Percent change from same period in previous year				
1980	7.8	11.0	2.8	9.6	2.7
1981	10.0	8.3	11.8	11.7	17.6
1982	16.8	14.0	23.8	9.7	12.0
1983	9.1	6.6	14.9	5.1	-9.7
1984	1.0	1.3	-2.5	13.7	-2.7
1985	5.3	0.7	13.9	-3.1	9.6
1986	-9.2	-6.6	-15.6	0.7	11.1
1987	6.1	2.1	13.0	3.2	-8.5
1987: 1st Q ...	-2.0	-3.0	-2.3	1.8	9.9
2nd Q ..	1.2	0.7	0.1	6.9	-3.7
3rd Q ...	12.1	5.4	26.0	0.6	-25.1
4th Q ...	13.3	5.5	29.5	3.2	-12.0

1/ Since December 1985, Navy data partly estimated due to change in reporting method.

e Estimate.

Note: Data include all appropriated expenditures for military and civilian payrolls, services, supplies, and construction. Excludes dependent allotments, retired military pay, and non-appropriated funds for exchanges, clubs, special services, etc.

Source: Quarterly reports from armed forces, compiled by DBED.

Table 5-4
DEFENSE EXPENDITURES BY CATEGORY: 1980 TO 1987

[Millions of dollars]

Year or quarter	All categories	Military payroll 1/	Civilian payroll	Supplies equipment services
1980	1,317.4	533.7	418.8	365.0
1981	1,449.3	612.8	450.7	385.9
1982	1,693.4	716.8	508.6	468.0
1983	1,848.2	793.8	558.2	496.2
1984	1,867.2	828.8	582.5	455.9
1985	1,965.4	839.9	611.4	514.1
1986	1,784.9	823.0	601.5	360.4
1987 (est.)	1,893.1	861.5	576.0	455.5
1987: 1st Q	444.2	210.8	134.9	98.6
2nd Q	453.6	214.3	146.3	93.0
3rd Q	495.3	219.3	142.3	133.6
4th Q (est.)	499.9	217.1	152.5	130.3
	Percent change from same period in previous year			
1981	10.0	14.8	7.6	5.7
1982	16.8	17.0	12.8	21.3
1983	9.1	10.7	9.8	6.0
1984	1.0	4.4	4.4	-8.1
1985	5.3	1.3	5.0	12.8
1986	-9.2	-2.0	-1.6	-29.9
1987	6.1	4.7	-4.2	26.3
1987: 1st Q	-2.0	4.6	-3.0	-12.4
2nd Q	1.2	4.4	-9.0	13.3
3rd Q	12.1	4.1	-2.4	56.4
4th Q	13.3	6.0	-2.2	62.3

1/ Since December 1985, Navy data partly estimated due to change in reporting method.

Note: Data include all appropriated expenditures for military and civilian payrolls, services, supplies, and construction. Excludes R&R expenditures, dependent allotments, retired military pay, and non-appropriated funds for exchanges, clubs, special services, etc.

Source: Quarterly reports from armed forces, compiled by DBED.

6. The Visitor Industry

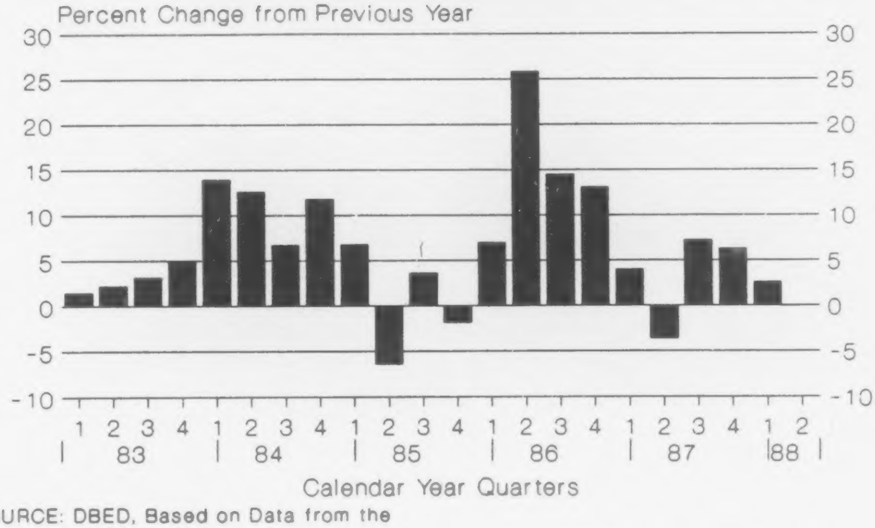
Preliminary estimates for the first three months of 1988 from the Hawaii Visitors Bureau (HVB) show trends similar to last year, with weakness in the Mainland tourism market and robust growth in Japanese tourism. Approximately 1.5 million visitors arrived in the first quarter, nearly 3 percent more than the same period in 1987. Visitor arrivals in 1987 totaled 5.8 million. This was a modest growth of 3.4 percent compared to the 1986 growth rate of 14.8 percent. The number of eastbound visitors arriving from the Orient and Pacific areas increased by 18.2 percent in 1987, exceeding the 14.9 percent increase of 1986. However, competition from other domestic and foreign vacation markets and higher hotel room rates, resulted in a 1 percent decline in the number of westbound visitors arriving from Mainland U.S. and Canada.

Despite the slower growth in visitor arrivals, the preliminary estimate for visitor expenditures in 1987 showed a hefty 16.4 percent increase over 1986. This was due to higher hotel room rates and the increased proportion of Japanese visitors, who spend more than three times as much per day on the average as do visitors from the Mainland.

Based on recent HVB estimates, the Japanese share of total number of visitors to Hawaii increased from 16.8 percent in 1986 to 20 percent in 1987. HVB also estimates that Japanese visitors on the average spent $366 per day in Hawaii last year compared to $102 per day spent by non-Japanese visitors.

Figure 6-1

GROWTH IN THE NUMBER OF VISITOR ARRIVALS



SOURCE: DBED, Based on Data from the Hawaii Visitors Bureau

Table 6-1
VISITOR ARRIVALS AND AVERAGE DAILY VISITOR CENSUS: 1980 TO 1988

Year 1/	Visitors staying overnight or longer			Average daily visitor census	
	Total	Westbound 2/	Eastbound 3/	Westbound 2/	All
1980	3,934,504	3,046,132	888,372	86,788	96,497
1981	3,934,623	2,974,791	959,832	85,449	95,968
1982	4,242,925	3,278,525	964,400	94,740	105,310
1983	4,368,105	3,396,115	971,990	97,390	108,040
1984	4,855,580	3,721,380	1,134,200	106,260	118,660
1985	4,884,110	3,708,610	1,175,500	103,820	116,700
1986	5,606,980	4,256,390	1,350,590	118,110	132,800
1987	5,799,830	4,204,010	1,595,820	116,780	134,100
1987: 1st Q	1,448,860	1,084,080	364,780	127,850	144,060
2nd Q	1,370,020	999,940	370,080	107,450	123,720
3rd Q	1,555,160	1,102,400	452,760	118,320	138,000
4th Q	1,425,790	1,017,590	408,200	113,670	131,420
1988: 1st Q	1,486,960	1,049,250	437,710	121,050	140,500
	Percent change from corresponding period in previous year				
1980	-0.7	-3.0	8.2	-3.2	-2.2
1981	0.0	-2.3	8.0	-1.5	-0.5
1982	7.8	10.2	0.5	10.9	9.7
1983	3.0	3.6	0.8	2.8	2.6
1984	11.2	9.6	16.7	9.1	9.8
1985	0.6	-0.3	3.6	-2.3	-1.7
1986	14.8	14.8	14.9	13.9	13.8
1987	3.4	-1.2	18.2	-1.1	1.0
1987: 1st Q	4.0	-0.3	19.4	0.6	2.4
2nd Q	-3.6	-8.6	13.2	-9.5	-7.0
3rd Q	7.2	2.7	19.9	3.7	5.7
4th Q	6.3	1.6	19.9	0.5	2.8
1988: 1st Q (p)	2.6	-3.2	20.0	-5.3	-2.5

p Preliminary.

1/ Beginning in 1984, sample size reduced from 20 to 10 percent and numbers rounded to the nearest 10.

2/ Arriving from the Mainland United States or Canada.

3/ Arriving from the Orient and Pacific areas.

Source: Hawaii Visitors Bureau.

Table 6–2
WESTBOUND VISITORS, BY COUNTY: 1981 TO 1988

Year 1/	City and County of Honolulu	Hawaii County	Maui County	Kauai County
1981	2,398,477	672,683	1,389,892	757,811
1982	2,589,190	678,170	1,550,080	733,295
1983	2,591,575	712,380	1,644,605	691,940
1984	2,901,320	760,940	1,854,690	814,590
1985	2,828,640	697,380	1,831,110	832,580
1986	3,146,030	786,930	2,003,870	1,014,650
1987	3,078,500	782,550	1,908,780	1,032,840
1987: 1st Q	776,110	227,890	498,660	262,940
2nd Q	739,190	181,350	450,740	247,150
3rd Q	825,750	188,160	499,840	278,530
4th Q	737,450	185,150	459,540	244,220
1988: 1st Q (p)	716,440	201,190	483,710	259,590
	Percent change from corresponding period in previous year			
1982	8.0	0.8	11.5	−3.2
1983	0.1	5.0	6.1	−5.6
1984	12.0	6.8	12.8	17.7
1985	−2.5	−8.4	−1.3	2.2
1986	11.2	12.8	9.4	21.9
1987	−2.1	−0.6	−4.7	1.8
1987: 1st Q	−1.4	6.4	−3.0	6.4
2nd Q	−9.1	−4.9	−13.2	−5.7
3rd Q	1.2	2.2	−0.4	6.9
4th Q	1.2	−6.5	−2.0	−0.2
1988: 1st Q (p)	−7.7	−11.7	−3.0	−1.3

p Preliminary

1/ Data prior to 1981 are not comparable to later figures due to revisions. Beginning in 1984, sample size changed from 20 to 10 percent.

Source: Hawaii Visitors Bureau.

Table 6-3

RESIDENCE OF OVERNIGHT AND LONGER VISITORS TO HAWAII: 1986 AND 1987

[In thousands and percent]

Place of residence	1986		1987		Percent change 1986 to 1987
	Number	% Dist.	Number	% Dist.	
Total	5,607	100.0	5,800	100.0	3.4
United States	3,739	66.7	3,669	63.3	-1.9
Foreign	1,868	33.3	2,131	36.7	14.1
Asia	1,083	19.3	1,313	22.6	21.2
Japan	944	16.8	1,161	20.0	23.0
Other Asia	139	2.5	152	2.6	9.4
Canada	282	5.0	242	4.2	-14.2
Europe	99	1.8	171	3.0	72.7
United Kingdom	49	0.9	66	1.1	34.7
West Germany	30	0.5	63	1.1	110.0
Other Europe	20	0.4	42	0.8	110.0
Oceania and South Pacific	360	6.4	373	6.4	3.6
Australia	219	3.9	218	3.8	-0.0
New Zealand	98	1.7	117	2.0	19.4
Other South Pacific	43	0.8	28	0.6	-11.6
Other foreign	44	0.8	232	0.5	-27.3

Source: Hawaii Visitors Bureau, tabular release dated March 1988.

Table 6–4
HOTEL OCCUPANCY RATES BY AREA: 1986 TO 1988

[Percent; survey excludes some large hotel chains]

Date	State	Oahu	Hawaii Island	Maui Island	Kauai Island	Molokai
1986	81.2	85.2	62.2	82.7	76.7	50.3
1987	81.1	86.8	60.8	76.2	74.2	45.4
Jan–March	87.6	92.6	72.6	82.9	78.3	67.8
1988 Jan–March	81.6	88.1	62.6	77.0	68.9	53.3
1987:						
January	82.6	89.4	68.4	74.7	67.1	72.0
February	92.6	95.8	84.1	89.6	85.6	74.0
March	88.1	92.9	66.0	85.3	84.2	58.2
April	75.8	79.8	57.1	75.6	70.0	40.1
May	77.0	80.4	60.1	75.8	76.5	37.7
June	78.4	87.1	47.4	68.9	70.5	31.7
July	83.2	90.6	57.4	72.6	78.4	35.0
August	87.5	93.3	65.8	81.8	82.9	39.8
September	75.7	82.7	52.3	66.7	70.3	34.8
October	81.1	85.6	61.4	78.1	79.1	39.7
November	81.3	86.8	60.6	78.0	71.9	42.7
December	71.0	78.3	52.6	62.1	54.0	44.9
1988:						
January	76.2	84.8	58.1	67.2	55.6	50.1
February	86.7	91.9	70.8	81.9	78.4	58.7
March	82.3	87.6	59.3	82.0	72.9	51.3

Source: Pannell Kerr Forster & Company, Trends in the Hotel Industry, Hawaii.

Table 6–5
VISITOR ACCOMMODATIONS IN HAWAII, BY TYPE: 1977 TO 1988

[As of February]

Year and island	Properties			Units		
	Total	Hotels 1/	Condo-miniums 2/	Total	Hotels 1/	Condo-miniums 2/
1977	335	(NA)	(NA)	44,986	39,901	5,085
1978	353	(NA)	(NA)	47,070	40,001	7,069
1979	381	(NA)	(NA)	49,832	41,299	8,533
1980	387	(NA)	(NA)	54,246	42,609	11,637
1981	412	214	198	56,769	42,575	14,194
1982	417	208	209	57,968	43,568	14,400
1983	426	218	208	58,765	45,352	13,413
1984	443	209	234	62,448	44,846	17,602
1985	481	207	274	65,919	44,115	21,804
1986	523	201	322	66,308	43,309	22,999
1987	510	196	314	65,318	43,422	21,896
1988	481	203	278	69,012	47,892	21,120
ISLANDS: 1988						
Oahu	183	110	73	37,841	30,206	7,635
Waikiki 3/	150	89	61	33,661	26,911	6,750
Rest of Oahu	33	21	12	4,180	3,295	885
Other islands	298	93	205	31,171	17,686	13,485
Hawaii	75	29	46	8,823	6,469	2,354
Kauai	78	32	46	7,180	4,325	2,855
Maui	137	29	108	14,591	6,556	8,035
Molokai	7	2	5	567	326	241
Lanai	1	1	–	10	10	–

NA Not available.

1/ Hotels, apartment hotels, motels, and cottages.

2/ Condominium accommodations in rental pools for transient use.

3/ Includes Diamond Head and Kahala but not areas ewa and mauka (west and north) of the Ala Wai Canal.

Source: Hawaii Visitors Bureau, Visitor Plant Inventory, 1976 to 1988.

Table 6-6
AVERAGE DAILY HOTEL ROOM RATES, BY ISLANDS: 1970 TO 1988

[Dollars]

Year	State	Oahu	Hawaii	Maui	Kauai	Molokai
1970	25.74	(NA)	(NA)	(NA)	(NA)	(NA)
1975	29.75	(NA)	(NA)	(NA)	(NA)	(NA)
1976	29.54	26.70	30.52	37.61	34.51	(NA)
1977	34.28	31.87	33.08	42.59	38.45	(NA)
1978	38.56	35.90	36.70	47.86	42.25	(NA)
1979	44.40	41.42	41.44	57.15	47.75	(NA)
1980	47.37	42.70	46.40	61.34	55.16	(NA)
1981	49.87	43.16	47.16	73.44	56.06	(NA)
1982	51.78	44.80	47.37	75.02	58.48	(NA)
1983	55.58	47.62	50.49	81.60	59.75	(NA)
1984	59.25	49.45	57.17	88.89	65.05	(NA)
1985	65.66	57.00	65.35	96.75	69.51	(NA)
1986	72.67	61.99	73.88	115.33	71.56	56.73
1987	80.09	69.04	82.21	127.05	81.65	64.26
1988 (Jan-Mar)	96.94	83.40	99.30	147.71	105.61	67.62
	Percent change from previous year					
1976	-0.7	(NA)	(NA)	(NA)	(NA)	(NA)
1977	16.1	19.4	8.4	13.2	11.4	(NA)
1978	12.5	12.7	10.9	12.4	9.9	(NA)
1979	15.2	15.4	12.9	19.4	13.0	(NA)
1980	6.7	3.1	12.0	7.3	15.5	(NA)
1981	5.2	1.1	1.6	19.7	1.6	(NA)
1982	3.8	3.8	0.4	2.2	4.3	(NA)
1983	7.4	6.3	6.6	8.8	2.2	(NA)
1984	6.6	3.8	13.2	8.9	8.9	(NA)
1985	10.8	15.3	14.3	8.8	6.9	(NA)
1986	11.5	9.0	15.1	17.5	8.4	(NA)
1987	10.2	11.4	11.3	10.2	14.1	13.3
1988 (Jan-Mar)	9.6	9.4	9.7	5.3	18.7	-5.1

NA Not available.

Source: Pannell Kerr Forster & Company, Trends in the Hotel Industry, Hawaii.

7. Construction

The construction industry continued to be very active during 1987. The current dollar value of construction completed during 1987 increased by 19 percent from the previous year. The total value of private building authorizations, an indicator of future construction activity, increased 14 percent in 1987 from the previous year. The industry recorded a 12 percent gain in jobs during 1987 (Table 4-2). Personal income in the construction industry (Table 3-3) increased 16 percent for 1987.

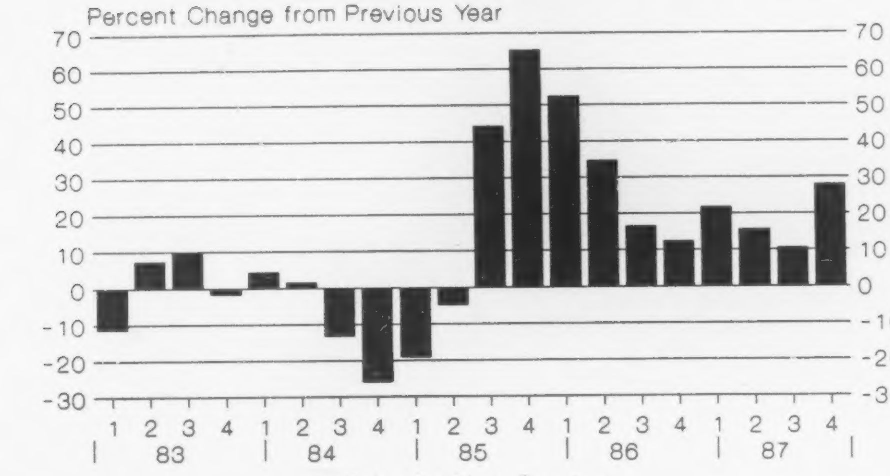
Among the different construction categories, government contracts showed a decline of 12 percent compared to a positive growth rate of 71 percent in 1986. However, this decline was more than offset by an increase in permits for hotel and commercial building which increased 29 percent for the year.

Total permit values grew fastest on Oahu at 38 percent over 1986. Hawaii County experienced a 37 percent decline in private permit values after an increase of 90 percent during 1986. Maui County posted a 6 percent increase from 1986, while Kauai County experienced an 11 percent growth.

Inflation in the construction industry, as shown by the growth in the Honolulu construction cost index, remained modest in 1987. The single-family residence construction costs increased by only 3.5 percent while high-rise building construction showed a 3.4 percent increase.

Figure 7-1

GROWTH IN CONSTRUCTION EXPENDITURES



SOURCE: DBED, Based on Data from the Dept. of Taxation

Table 7–1
ESTIMATED VALUE OF COMPLETED CONSTRUCTION, NEW PRIVATE BUILDING AUTHORIZATIONS, AND GOVERNMENT CONTRACTS AWARDED, HAWAII: 1985 TO 1988

[Millions of dollars]

Year	Value of construction completed 1/	Private building authorizations				Government contracts awarded
		Total private authorization	Residential	Commercial and industrial 2/	Additions and alterations	
1985	1,429.6	889.0	500.1	208.8	180.1	248.5
1986	1,810.0	1,024.1	455.5	266.3	302.3	425.1
1987	2,145.5	1,161.9	507.0	344.4	310.5	372.2
1987: 1st Q	498.9	248.8	122.7	72.7	53.4	97.2
2nd Q	540.5	325.2	134.7	80.9	109.6	90.4
3rd Q	552.4	268.6	119.0	67.7	81.9	125.1
4th Q	553.7	319.3	130.6	123.1	65.6	59.5
1988: 1st Q 3/	(NA)	222.1	99.8	58.2	64.1	(NA)
	Percent change from corresponding period in previous year					
1985	16.5	52.9	52.6	100.8	20.2	-39.6
1986	26.6	15.7	-10.6	32.7	68.7	71.1
1987	18.5	13.5	11.3	29.3	2.7	-12.4
1987: 1st Q	21.8	1.6	-1.5	4.6	4.7	21.8
2nd Q	15.6	47.5	42.8	24.3	79.4	-20.8
3rd Q	10.5	-24.3	-12.1	-21.3	-38.7	-20.6
4th Q	27.9	56.9	29.2	169.4	15.7	-16.9
1988: 1st Q	(NA)	3.7	-1.1	-11.3	34.7	(NA)

NA Not available.

1/ Value of construction subject to State excise tax, adjusted to reflect reporting delay of about one month.

2/ Includes hotels.

3/ Excludes Maui County building private authorizations. Percent computations based on comparable periods and coverage.

Source: Hawaii State Department of Taxation; County building departments; Trade Publishing Co., Building Industry Digest: BID Service Weekly.

Table 7–2
ESTIMATED VALUE OF PRIVATE BUILDING CONSTRUCTION AUTHORIZATIONS, BY COUNTY: 1980 TO 1988

[Millions of dollars]

Year	State	City and County of Honolulu	Hawaii County	Kauai County	Maui County
1980	1,219.2	686.3	146.0	133.3	253.7
1981	802.0	454.1	136.5	67.7	143.7
1982	683.1	473.0	75.2	44.2	90.7
1983	685.2	366.8	86.7	140.5	91.3
1984	581.5	378.3	90.3	53.0	59.8
1985	889.0	524.8	121.3	63.9	178.9
1986	1,024.1	545.3	231.5	93.2	154.1
1987	1,161.9	749.5	145.2	103.5	163.8
1987: 1st Q	248.8	156.9	27.7	29.6	34.7
2nd Q	325.2	221.0	34.7	22.7	46.8
3rd Q	268.6	153.3	38.3	32.0	45.1
4th Q	319.3	218.3	44.6	19.2	37.2
1988: 1st Q 1/	222.1	154.1	36.8	31.2	(NA)
	Percent change from corresponding period in previous year				
1980	39.4	36.9	30.1	17.1	72.0
1981	-34.2	-33.8	-6.5	-49.2	-43.4
1982	-14.8	4.2	-44.9	-34.7	-35.0
1983	0.3	-22.4	15.3	217.5	0.6
1984	-15.1	3.1	4.3	-62.3	-34.4
1985	52.9	38.7	34.3	20.5	199.0
1986	15.2	3.9	90.8	45.9	-13.9
1987	13.5	37.5	-37.3	11.0	6.3
1987: 1st Q	1.6	4.0	25.4	-29.7	15.8
2nd Q	47.2	95.7	-40.7	41.9	40.8
3rd Q	-24.3	-7.3	-67.9	66.8	-13.3
4th Q	56.9	86.7	40.3	20.8	-4.4
1988: 1st Q 1/	3.7	-1.8	32.9	5.4	(NA)

NA Not available.

1/ Excludes Maui County building authorizations. Percent computations based on comparable periods and coverage.

Source: County building departments.

Table 7–3
ESTIMATED VALUE OF GOVERNMENT CONSTRUCTION CONTRACTS AWARDED IN HAWAII, BY AWARDING AGENCY: 1980 TO 1987

[Millions of dollars]

Year	Total	Federal	State	County
1980	230.6	66.5	120.0	44.1
1981	427.5	176.1	180.5	70.9
1982	392.7	139.6	182.0	71.2
1983	277.9	84.7	126.8	66.4
1984	411.8	130.0	196.7	85.1
1985	248.5	74.8	93.8	79.9
1986	425.1	101.9	205.4	117.8
1987	372.2	107.9	174.2	90.1
1986: 1st Q	79.8	13.9	47.6	18.3
2nd Q	114.1	6.9	48.7	58.4
3rd Q	159.6	38.1	90.8	30.7
4th Q	71.6	36.2	119.1	47.4
1987: 1st Q	97.2	18.3	51.9	27.0
2nd Q	90.4	12.4	39.4	38.6
3rd Q	125.1	56.7	52.8	15.6
4th Q	59.5	20.4	30.1	8.9
	Percent change from corresponding period in previous year			
1980	-40.7	-37.1	-45.7	-28.8
1981	85.4	164.8	50.5	60.6
1982	-8.1	-20.7	0.8	0.4
1983	-29.3	-39.3	-30.3	-6.7
1984	48.2	53.4	55.1	28.2
1985	-39.6	-42.4	-52.3	-6.2
1986	71.1	36.2	119.1	47.4
1987	-12.4	5.9	-15.2	-49.3
1986: 1st Q	53.1	87.3	500.6	-50.3
2nd Q	121.9	-56.6	78.9	603.6
3rd Q	144.5	421.5	170.2	25.8
4th Q	-10.2	-2.7	-26.7	-1.1
1987: 1st Q	21.8	31.7	9.0	47.5
2nd Q	-20.8	80.2	-19.2	-34.0
3rd Q	-20.6	53.9	-41.9	-48.0
4th Q	-16.9	-43.6	-74.7	-81.2

Source: Trade Publishing Co., Building Industry Digest: BID Service Weekly and First Hawaiian Bank, Research Division.

Table 7–4
NUMBER OF SINGLE-FAMILY AND MULTI-FAMILY HOUSING UNITS AUTHORIZED BY COUNTY: 1980 TO 1988

Year	State	City and County of Honolulu	Hawaii County	Kauai County	Maui County
Single family units (including duplexes):					
1980	4,058	1,645	1,204	401	808
1981	2,649	728	1,048	409	464
1982	2,285	725	800	230	530
1983	3,417	1,627	938	291	561
1984	4,442	2,513	928	361	640
1985	4,951	2,436	1,046	453	1,016
1986	4,700	2,173	1,144	438	945
1987	6,066	2,870	1,442	599	1,155
1987: 1st Q	1,523	749	325	137	312
2nd Q	1,639	843	337	148	311
3rd Q	1,429	590	399	161	279
4th Q	1,475	688	381	153	253
1988: 1st Q 1/	913	359	352	202	(NA)
Multi-family units (3 or more units per structure):					
1980	6,603	3,297	727	766	1,813
1981	3,142	1,873	270	64	935
1982	4,594	4,109	245	118	122
1983	1,341	1,220	38	73	10
1984	1,021	829	153	35	4
1985	2,450	1,807	128	84	431
1986	2,479	1,986	21	0	472
1987	1,459	785	138	0	536
1987: 1st Q	488	488	0	0	0
2nd Q	567	80	77	0	410
3rd Q	99	99	0	0	0
4th Q	305	118	61	0	126
1988: 1st Q	384	162	222	0	(NA)

NA Not available.

1/ Excludes Maui County building authorizations.

Source: County building departments.

Table 7-5
HONOLULU CONSTRUCTION COST INDEXES: 1983 TO 1987

[1982=100]

Year	Single-family residence			High-rise building		
	All components	Material prices	Labor 1/	All components	Material prices	Labor 1/
1983..............	109.5	111.3	107.3	106.9	107.4	106.9
1984..............	114.3	113.1	115.8	110.9	108.0	114.5
1985..............	117.4	115.2	120.1	113.5	108.7	118.4
1986..............	121.5	119.1	124.4	116.8	110.8	122.6
1987..............	125.7	123.7	128.2	120.7	113.9	125.8
1986: 1 Q.....	120.3	118.1	123.2	117.1	112.4	121.1
2 Q.....	119.6	116.8	123.2	115.3	108.6	121.1
3 Q.....	121.2	118.7	124.3	116.3	111.2	122.3
4 Q.....	124.8	123.0	126.9	118.5	110.8	125.2
1987: 1 Q.....	123.9	120.7	127.9	119.8	112.9	125.7
2 Q.....	124.6	121.6	128.3	120.8	115.0	125.8
3 Q.....	126.3	124.8	128.3	121.2	115.8	125.8
4 Q.....	128.0	127.7	128.3	121.2	115.8	125.8
	Percent change from corresponding period in previous year					
1983..............	9.5	11.3	7.3	6.9	7.4	6.9
1984..............	4.3	1.6	7.9	3.8	0.6	7.1
1985..............	2.7	1.9	3.7	2.4	0.6	3.4
1986..............	3.5	3.4	3.6	2.9	1.9	3.5
1987..............	3.5	3.8	3.0	3.4	2.9	2.7
1987: 1 Q.....	3.0	2.2	3.8	2.3	0.4	3.8
2 Q.....	4.2	4.1	4.1	4.8	5.9	3.9
3 Q.....	4.2	5.1	3.2	4.2	4.1	2.9
4 Q.....	2.6	3.8	1.1	2.3	4.5	0.5

1/ Includes wages and benefits.
Source: First Hawaiian Bank, Research Division.

8. POPULATION

PROVISIONAL ESTIMATES FOR 1987

The resident population of Hawaii in mid-1987 was 1,082,500, according to provisional estimates recently released by the U.S. Bureau of the Census. This total was 1.7 percent higher than the revised 1986 estimate and 12.2 percent above the 1980 census count. The 1987 total included 58,100 members of the Armed Forces stationed or homeported in Hawaii, 64,800 military dependents, and 959,500 civilians other than military dependents.

The 1987 de facto population was around 1,199,000. This estimate refers to the total number of persons physically present in the State, regardless of their usual place of residence. It includes some 134,000 visitors present on an average day during the year but excludes approximately 18,000 residents temporarily absent on a typical day. The de facto population increased about 13.9 percent in the 87 months since the 1980 census.

The de facto population density of Hawaii in 1987 was 186.6 per square mile of land area or 72.0 per square kilometer. This was more than twice the corresponding nationwide density estimated at 68.8 per square mile (26.6 per square kilometer).

The population of the Islands is still growing much more rapidly than that of the entire United States, but by a smaller margin than in the past. During the 1970s, annual growth rates (continuously compounded) were 1.1 percent nationally and 2.3 percent for the resident population of Hawaii. During the 1980-1987 period, the annual rates had fallen to 1.0 percent for the entire country and 1.6 percent for Hawaii. Hawaii ranked 39th among the 50 states and D.C. in total population in 1987 and 12th in percent increase since 1980.

The resident population of the State increased by 117,800 between April 1, 1980 and July 1, 1987. This growth was composed of 134,000 live births, 39,300 deaths, and a net in-migration of 23,100. It should be stressed that these figures include military families, who accounted for 21.0 percent of the births but only 2.0 percent of the deaths. Since most military families leave after a two- or three-year tour of duty, taking their Hawaii-born children with them, they record a large net out-migration-over 25,000, in fact, between 1980 and 1987. Excluding military personnel and their dependents, net in-migration was 48,500, or 6,700 annually. The corresponding annual average during the 1970s was 10,600. Natural increase--the excess of births over deaths--accounted for 43.5 percent of the net growth in the 1970s and 58.2 percent in the first 7 years of the 1980s. The share attributable to net in-migration meanwhile declined from 55.6 to 41.8 percent.

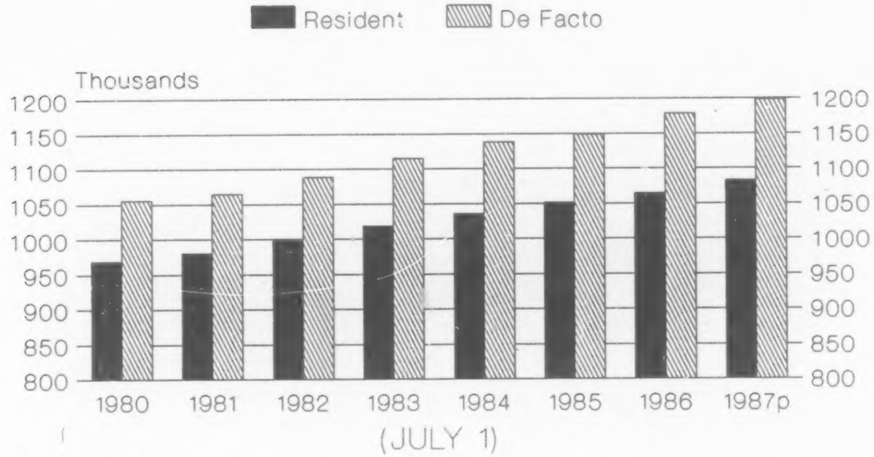
Growth in the resident population was accompanied by significant shifts in age composition. The median age rose from 21.7 years in 1930 and 25.0 in 1970 to 28.3 in 1980 and 30.9 in 1986.

The number of households in the State has increased even more rapidly than the resident population. The household total rose from 294,000 in 1980 to 345,000 in 1987, or 17.3 percent. The average number of persons per household meanwhile declined, from 3.15 to 3.02.

The 1987 estimates of both resident and de facto population are preliminary and subject to revision a year hence. The 1981-1986 estimates shown here have been revised from the figures reported in DBED Statistical Report 201, DOH Statistical Report 1986, the 1986 edition of The State of Hawaii Data Book, and various publications of the Bureau of the Census.

Figure 8-1

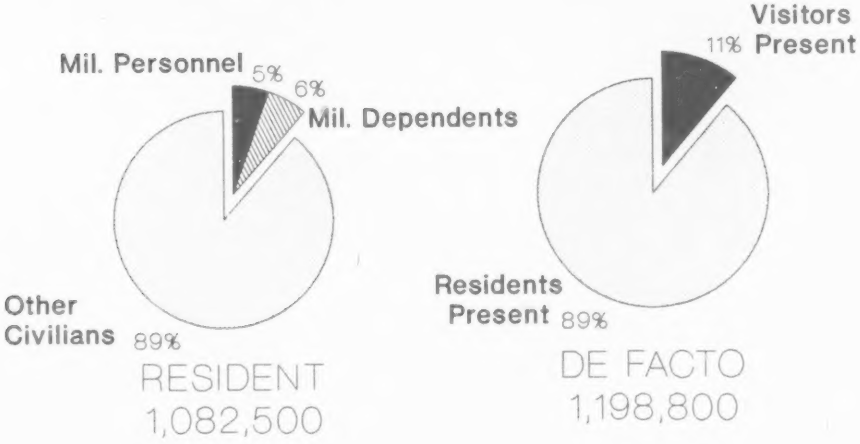
RESIDENT AND DE FACTO POPULATION: 1980 TO 1987



p provisional estimate
SOURCE: DBED. Data from Tables 8-1 and 8-2.

Figure 8-2

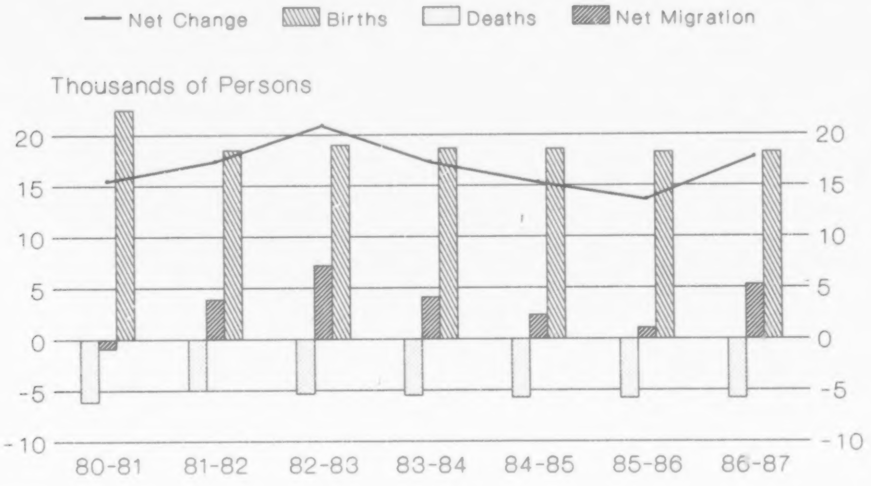
DISTRIBUTION OF RESIDENT AND DE FACTO POPULATIONS: 1987



SOURCE: DBED. Data from Tables 8-1 and 8-2.

Figure 8-3

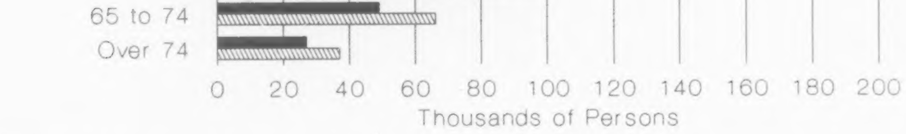
COMPONENTS OF CHANGE IN THE RESIDENT POPULATION: 1980 TO 1987



SOURCE: DBED. Data from Table 8-4.

Figure 8-4

RESIDENT POPULATION BY AGE GROUPS: 1980 AND 1986



SOURCE: DBED. Data from Table 8-6.

Table 8-1
RESIDENT POPULATION, BY MILITARY STATUS: 1980 TO 1987

[Excludes visitors present but includes residents temporarily absent and armed forces stationed or homeported in Hawaii]

Date	Total resident population	Armed forces 1/	Civilian population: All civilians	Civilian population: Military dependents 2/	Civilian population: Not military dependents
1980: April 1	964,691	57,056	907,635	64,023	843,612
July 1	968,900	57,900	911,000	64,100	846,900
1981: July 1	980,200	56,600	923,600	64,300	859,300
1982: July 1	997,600	54,900	942,700	66,700	876,000
1983: July 1	1,018,500	55,200	963,400	66,300	897,100
1984: July 1	1,035,800	57,300	978,500	67,100	911,400
1985: July 1	1,051,100	56,400	994,700	64,300	930,500
1986: July 1	1,064,700	58,100	1,006,600	66,200	940,400
1987: July 1 3/	1,082,500	58,100	1,024,400	64,900	959,500

1/ These figures are the estimates developed by the U.S. Bureau of the Census for use in population estimation. They differ somewhat from corresponding figures from other sources (see DBED, Statistical Report 207).

2/ Dependents living in Hawaii, regardless of location of family head.

3/ Provisional estimates.

Source: Military dependents from DBED, Statistical Report 207 (Nov. 30, 1987); other estimates from U.S. Bureau of the Census, memorandum dated Dec. 16, 1987 and additional data provided Feb. 4, 1988.

Table 8-2
RESIDENT AND DE FACTO POPULATION, BY RESIDENCE STATUS: 1980 TO 1987

Date	Resident population 1/		De facto population 2/	
	Total	Temporarily absent 3/	Total	Visitors present 3/
1980: April 1	964,691	9,635	1,052,659	97,603
July 1	968,900	9,600	1,055,800	96,500
1981: July 1	980,200	11,600	1,064,600	96,000
1982: July 1	997,600	14,500	1,088,300	105,300
1983: July 1	1,018,500	11,500	1,115,100	108,000
1984: July 1	1,035,800	16,100	1,138,400	118,700
1985: July 1	1,051,100	18,600	1,149,300	116,700
1986: July 1	1,064,700	18,400	1,179,100	132,800
1987: July 1 4/	1,082,500	17,800	1,198,800	134,100

1/ The resident population is defined as the number of persons whose usual place of residence is in an area, regardless of physical location on the estimate or census date. It includes military personnel stationed or homeported in the area but excludes persons of local origin attending school or in military service outside the area.

2/ The de facto population is defined as the number of persons physically present in an area, regardless of usual place of residence; it includes visitors present but excludes residents temporarily absent.

3/ Averages for 12-month periods centered on the estimate or census dates.

4/ Provisional estimates.

Source: Resident population from present report, Table 2; residents absent and visitors present estimated by DBED from Hawaii Visitors Bureau Basic Data Survey (1987 based on provisional data).

Table 8-3
RESIDENT POPULATION OF HAWAII AND THE UNITED STATES: 1970, 1980, AND 1987

Area	Population (1,000)			Percent change 1/	
	April 1, 1970	April 1, 1980	July 1, 1987	1970 to 1980	1980 to 1987
Hawaii	769.9	964.7	1,082.5	2.3	1.6
United States	203,302	226,546	243,400	1.1	1.0

1/ Annual rate, based on the formula for continuous compounding.
Source: U.S. data from U.S. Dept. of Commerce News Release CB87-205 (Dec. 30, 1987), and Statistical Abstract of the United States: 1987, p. 8; Hawaii data from present report, table 1.

Table 8-4
COMPONENTS OF CHANGE IN THE RESIDENT POPULATION: 1980 TO 1987

[For definition of resident population, see table 8-2, footnote 1]

Period	Net change		Births	Deaths	Net migration
	Number	Percent			
1980 to 1981 1/	15,500	1.61	22,500	6,100	-900
1981 to 1982 2/	17,400	1.77	18,500	5,000	+3,900
1982 to 1983 2/	20,900	2.10	19,000	5,300	+7,200
1983 to 1984 2/	17,300	1.70	18,700	5,500	+4,100
1984 to 1985 2/	15,300	1.48	18,600	5,700	+2,400
1985 to 1986 2/	13,600	1.29	18,300	5,800	+1,100
1986 to 1987 2/	17,800	1.67	18,300	5,800	+5,300
1980 to 1987 3/	117,800	12.21	134,000	39,300	+23,100

1/ April 1 to July 1 (15 months).
2/ July 1 to July 1.
3/ April 1, 1980 to July 1, 1987.
Source: U.S. Bureau of the Census, memorandum dated December 16, 1987.

Table 8-5

COMPONENTS OF CHANGE IN THE RESIDENT POPULATION, BY MILITARY STATUS: 1970 TO 1980 AND 1980 TO 1987

Period and component	All groups	Armed forces	Civilian population			
			Military dependents	Not military dependents		
				Number	Annual average	Percent distrib.
1970 TO 1980 1/						
Net change	+194,778	+1,911	+2,165	+190,702	+19,070	100.0
Natural increase	118,654	-447	36,233	82,868	8,287	43.5
Live births	161,831	-	37,234	124,597	12,460	...
Death	43,177	447	1,001	41,729	4,173	...
Net mil. separations 2/	-	-1,815	-	+1,815	+181	1.0
Net migration 3/	+76,124	+4,173	-34,068	+106,019	+10,602	55.6
1980 TO 1987 4/						
Net change	+117,800	+1,100	+800	+115,900	+16,000	100.0
Natural increase	94,700	-200	27,500	67,400	9,300	58.2
Live births	134,000	-	28,100	105,900	14,600	...
Deaths	39,300	200	600	38,500	5,300	...
Net migration 5/	+23,100	+1,200	-26,600	+48,500	+6,700	41.8

1/ April 1, 1970 to March 31, 1980.

2/ Separations less inductions for armed forces.

3/ Includes error of closure.

4/ April 1, 1980 to June 30, 1987. Provisional.

5/ Includes net military separations.

Source: U.S. Bureau of the Census, memorandum dated December 16, 1987, and additional data provided February 4, 1988; DBED, Statistical Reports 173 and 207, and unpublished estimates; Hawaii State Department of Health, records.

Table 8-6
RESIDENT POPULATION, BY AGE AND SEX: 1980 AND 1986

[In thousands. Includes armed forces stationed or homeported in Hawaii. The 1986 estimates are provisional]

Age group	April 1, 1980 (census)			July 1, 1986 (estimates)		
	Both sexes	Male	Female	Both sexes	Male	Female
Total	965	495	470	1,062 1/	542	520
Under 5 years	78	40	38	90	46	44
5 to 14 years	148	76	72	150	77	73
15 to 24 years	192	105	87	175	95	80
25 to 34 years	180	92	88	196	101	95
35 to 44 years	111	56	55	155	78	77
45 to 54 years	94	45	50	94	45	49
55 to 64 years	85	42	43	99	50	49
65 to 74 years	49	26	23	66	33	33
75 years and over	27	12	15	37	18	20
5 to 17 years	198	102	96	196	101	95
18 to 24 years	142	79	63	129	71	58
25 to 44 years	291	148	143	351	179	172
45 to 64 years	180	87	92	193	95	99
14 years and over	754	386	368	837	426	411
16 years and over	723	370	352	807	411	396
18 years and over	689	353	336	777	396	381
21 years and over	631	320	310	725	367	357
65 years and over	76	38	38	103	50	53
Median age	28.3	27.6	29.1	30.9	30.2	31.7

1/ For revised 1986 estimate, see present report, tables 1, 2, and 3.

Source: U.S. Bureau of the Census, "State Population and Household Estimates, with Age, Sex, and Components of Change: 1981-86," Current Population Reports. Population Estimates and Projections Series P-25, No. 1010 (September 1987), p. 45.

Table 8-7
HOUSEHOLDS AND HOUSEHOLD SIZE: 1970 TO 1987

[As of April 1, 1970 and 1980, and July 1 for all other years]

Year	Households	Average size
1970	203,088	3.59
1971	215,600	3.53
1972	225,700	3.49
1973	235,400	3.45
1974	243,300	3.40
1975	252,000	3.36
1976	260,800	3.31
1977	268,700	3.27
1978	276,600	3.22
1979	287,400	3.18
1980	294,052	3.15
1981	304,000	(NA)
1982	310,000	(NA)
1983	316,000	(NA)
1984	323,000	(NA)
1985	330,000	(NA)
1986	336,000	3.04
1987	345,000	3.02

NA Not available.

Source: Hawaii State Department of Planning and Economic Development, The Population of Hawaii, 1970-1984 (Statistical Report 173, Feb. 2, 1985), p. 12; U.S. Bureau of the Census, "State Population and Household Estimates, with Age, Sex, and Components of Change: 1981-1986," Current Population Reports, Population Estimates and Projections, Series P-25, No. 1010 (Sept. 1987), p. 87; U.S. Bureau of the Census, "Estimates of Households for State: April 1 1980 to July 1, 1987," press release April 5, 1988.

Table 9–1
RECENT ECONOMIC AND DEMOGRAPHIC TRENDS: STATE OF HAWAII

Series 1/	Unit	Period 2/	Number	Percent change from same period in previous year
Resident population (p)	Persons	7/1/87	1,082,500	1.7
City and County of Honolulu	Persons	7/1/86	818,500	0.9
Hawaii County	Persons	7/1/86	112,000	2.3
Kauai Island	Persons	7/1/86	46,200	2.3
Maui Island	Persons	7/1/86	78,900	2.7
Molokai	Persons	7/1/86	6,700	2.5
Lanai	Persons	7/1/86	2,200	1.0
Niihau	Persons	7/1/86	214	18.9
Personal income	$ Million	1987	16,634	6.8
Consumer price index				
Honolulu	(1982-84 = 100)	1987	114.9	5.0
U.S.	(1982-84 = 100)	1987	113.6	3.6
Construction				
Private permits 3/	$ Million	1st Q	222.1	3.7
Residential permits	$ Million	1st Q	99.8	– 1.1
New single-family units	Number	1st Q	913	– 24.6
New multi-family units	Number	1st Q	384	– 21.3
Commercial & industrial	$ Million	1st Q	58.2	– 11.3
Additions & alterations	$ Million	1st Q	64.1	34.7
Government contracts awarded	$ Million	1987	372.2	– 12.4
Construction cost indexes (Hon.)				
Single-family units	(1982 = 100)	1987	125.7	3.5
High-rise buildings	(1982 = 100)	1987	120.7	3.3
Employment (p)				
Civilian labor force	Persons	1st Q	525,950	5.1
Civilian employment	Persons	1st Q	507,750	5.7
Civilian unemployment	Persons	1st Q	18,200	– 9.0
Unemployment rate	Percent	1st Q	3.5	–
Total jobs	Number	1st Q	514,300	3.7
Visitor industry				
Total visitors	Number	1st Q	1,486,960	2.6
Westbound	Number	1st Q	1,049,250	– 3.2
Eastbound	Number	1st Q	437,710	20.0
Visitor expenditures (p)	$ Billion	1987	6.4	16.4
Hotel units	Number	February	69,012	5.7
Defense expenditures	$ Million	1987	1,893	6.1
Sugar production (p)	$ Million	1986	377.0	5.0
Pineapple sales (p)	$ Million	1987	251.8	4.0

p Provisional estimates.

1/ Statewide data unless indicated otherwise.

2/ Data for 1988 unless otherwise noted.

3/ Excludes data for Maui County.

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DEPARTMENT OF BUSINESS
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QUARTERLY

STATISTICAL & ECONOMIC REPORT

RESEARCH & ECONOMIC ANALYSIS DIVISION

- The Economy: Recent Trends and Outlook
- Alternative Five-Year Economic Scenarios
- Statistical Tables

3RD QUARTER 1988

STATE OF HAWAII
1959

This quarterly report has been prepared by the Research and Economic Analysis Division of the State Department of Business and Economic Development (DBED). It presents information and analysis concerning current statistical and economic trends affecting Hawaii. Technical notes and source descriptions have been kept to a minimum. However, the staff of the Research and Economic Analysis Division will be happy to respond to any inquiries of a technical nature that readers may have (548-8435).

The report was prepared under the direction of Dr. Richard Y. P. Joun, Head, Research and Economic Analysis Division, by Hamid Jahanmir, Sharon Nishi, Robert Shore, and Tu Duc Pham.

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1. The Economy -- Recent Trends and Outlook

Vigorous economic growth continued in the State through the second quarter of 1988, with tourism and construction fueling the activity.

Nationally, inflation and interest rates have trended upwards in recent months due to increased strength in the national economy and efforts by the Federal Reserve to cool inflationary pressures by raising interest rates thereby dampening private sector borrowing.

The outlook for Hawaii is for a strong economy through the rest of this year with the likelihood of some cooling down of activity in 1989, assuming the U.S. economy continues its modest-growth trend as national forecasts currently anticipate.

CURRENT ECONOMIC TRENDS

Hawaii's Economy

Through the first half of this year, Hawaii's economy has performed well and very close to earlier forecasts. Tourism and construction continue to be the major contributors to growth in business activity.

The strength of the economy has been felt widely within the business community. Overall business activity in Hawaii measured by excise and use tax data showed a 13.9 percent increase during the first six months of 1988, compared with the same period in 1987. The value of construction completed in the first half of 1988 increased by 22.1 percent over the same 1987 period.

As a result of this activity, personal income in Hawaii increased 7.3 percent in the first quarter of the year, moderately above the 6.4 percent increase for the nation as a whole. Employment growth increased 3.0 percent during the first six months of 1988, compared with the same period last year. Hawaii's unemployment rate, which dropped to 3.2 percent during the first six months of 1988, is the fourth lowest in the U.S. and is a record low rate for the State since the current unemployment data series was begun in 1969.

A negative effect of the robust growth has been increased inflation. As measured by the Honolulu Consumer Price Index (CPI-U), prices increased 6 percent from the first half of 1987 to the first half of this year. During the same period, consumer prices for the U.S. city average increased 4 percent. Surges in food and housing prices during the first half of this year were the major contributors to the increase in consumer inflation for Honolulu.

Tourism has turned in a strong but rather lopsided performance so far in 1988, with eastbound visitor traffic continuing to break records while westbound traffic has lagged slightly behind last year's pace. Total visitor arrivals to Hawaii during the first half of 1988 grew 5.4 percent ahead of the 4 percent increase forecast for all of 1988. The number of eastbound visitors, mostly Japanese visitors, grew 21.6 percent during the first half, while the number of westbound visitors decreased a slight 0.4 percent. Among the factors which have contributed to the growth of eastbound visitors has been the strong yen and an effort by the Japanese government to increase the number of Japanese overseas travelers to 10 million by 1991.

Visitor expenditures, which totaled $6.6 billion in 1987, are expected to easily pass the $7.0 billion mark in 1988 due to the increase in the proportion of Japanese visitors who spend, on average, more than three times as much per day as do other visitors.

Construction is well into its fourth year of a building boom which began in 1985, although some of the data on the industry's performance are showing conflicting results. The tax-based value of construction completed during the first six months of the year showed a 22.1 percent increase over the same 1987 period. However, the number of jobs in the industry showed a 3 percent decline for the same period. It is likely that neither figure is reflective of the real amount of construction going on. Adjusted tax-based construction value data for price increases would probably show growth of 7 to 10 percent in real terms. Currently available job data, on the other hand, are very preliminary and probably underestimate actual employment. In the meantime, the value of private permit data, which reflects construction planned for the near future, showed a 16 percent increase in the first six months, indicating brisk activity will continue in the industry for at least some months to come.

Based on estimates by the U.S. Department of Agriculture, the tonnage of harvested sugar cane is expected to increase 3.6 percent to 8.5 million tons in 1988, compared with a 4.6 percent decline during 1987. However, the number of jobs in the industry declined 2.6 percent during the first six months of the year. The higher production level in the face of employment declines is the result of increased productivity in the industry which has substantially reduced the need for labor in the industry over the years.

The pineapple industry experienced a 8.3 percent increase in jobs during the first half of this year. However, this probably reflects seasonal variation in production rather than a significant increase in activity for the year. The pineapple industry contributed $252 million to the State's economy in 1987, a 4 percent increase from the previous year.

While employment in both the sugar and pineapple industries decreased last year, employment in diversified agriculture (which has been employing more workers than the sugar industry in recent years) increased by 17.1 percent. However, this growth leveled off to a 0.7 percent gain for the first six months of 1988. In terms of the total farm value of processed fruits, guava, papaya, and passion fruit reached a record high of $2.5 million in 1987, a 16.9 percent increase from the previous year.

Guava farms had a record crop during 1987, and strong demand for guava pushed its price up to a record high of 12.0 cents per pound. As the result, the total value of processed guava during 1987 reached $2.2 million, a 20 percent growth over 1986.

The National Economy

Despite the pessimistic views of the economic outlook following the October 1987 stock market "crash," the national economy continued to expand briskly into the second half of 1988. Real gross national product increased 3.1 percent during the second quarter, following a 3.4 percent growth rate in the first quarter.

However, the strength of the current economic expansion, its resulting high demand for labor and capital and the drought in the Midwest, have all caused an accelerated rate of inflation. In August, the Federal Reserve Board increased the interest rate it charges to banks in an effort to slow down the economy before inflation becomes a more serious problem. This will likely push all other interest rates up somewhat.

At this point, the Federal Reserve's actions do not appear to pose an immediate threat to Hawaii's current strong pace of economic growth. However, higher interest rates could raise the value of the dollar relative to foreign currencies. A stronger dollar could slow the growth in the number of foreign visitors to Hawaii. Higher interest rates could also cool off investment activities and adversely affect the construction industry in Hawaii. Still, it is not yet clear that either interest rates or inflation will climb significantly higher than current levels.

Internationally, the economic situation is also better than was forecast at the beginning of the year in the wake of the stock market crash. As in the U.S. economy, the risk of a recession has receded in most industrialized countries while the inflation risk has grown.

In Japan, domestic consumer and investment demand has been accelerating over the past year and imports have been rising due to a stronger value of the yen and the lifting of some restrictions on imports. The major issue for developed countries and Japan for the next few months is avoiding inflation and a rise in the value of the dollar relative to those countries' own currencies.

ECONOMIC OUTLOOK FOR 1988 AND BEYOND

Table 1-1 summarizes the current composite forecast for 1988 and 1989 by *Blue Chip Economic Indicators*. The national economy is expected to continue growing into 1989 but at a more modest rate than in recent months. The current major concern about the economy's future health is the possibility of higher inflation. The economy's rapid expansion and its resulting low unemployment rate has caused concern among many economists and policy-makers that inflationary pressures may be rising too fast. The Federal Reserve recently increased the discount rate by half a percentage point in order to slow borrowing, spending and reduce inflationary pressures.

The current DBED forecast for Hawaii appears in Table 1-2. Visitor arrivals in 1988 are expected to be about 4.0 percent over the 1987 level. The number of eastbound visitors is expected to grow about 12 percent during 1988 due to increase in the number of Japanese visitors. However, higher hotel room rates in Hawaii and competition from other resort areas, mainly Mexico, will likely hold down the growth of westbound visitors to about 1 percent over 1987.

The construction industry will continue its growth in 1988 and is expected to show a 7 percent growth rate in real terms. However, the recent increase in interest rates could have a slowing effect on the industry in 1989.

For agriculture, recent trends are expected to continue. Declining employment in sugar and pineapple will be offset by increases in diversified agriculture.

Table 1-1
COMPOSITE FORECAST OF KEY U.S. ECONOMIC VARIABLES: 1988 AND 1989

a. Growth Rates 1/

Variable	Quarterly growth					Annual growth rates	
	Actual	Forecast					
	2nd Q, 1988	3rd Q, 1988	4th Q, 1988	1st Q, 1989	2nd Q, 1989	1987 to 1988	1988 to 1989
Real GNP	3.1	2.8	2.7	2.5	2.0	3.8	2.3
Industrial production	4.6	4.2	3.8	3.0	2.3	5.2	2.9
GNP deflator	4.1	4.2	4.2	4.4	4.4	3.1	4.3
Consumer price index	4.9	4.7	5.0	5.0	5.0	4.1	4.9
Real disposable income	-0.4	3.5	2.2	2.4	1.6	3.2	2.2

b. Average Rate for Period (Percent)

Variable	Quarterly data					Annual	
	Actual	Forecast					
	2nd Q, 1988	3rd Q, 1988	4th Q, 1988	1st Q, 1989	2nd Q, 1989	1988	1989
Unemployment rate	5.4	5.4	5.4	5.4	5.5	5.5	5.5
90-day Treasury bill rate	6.2	6.9	7.0	7.2	7.2	6.5	7.0
AAA corporate bond rate	9.8	10.0	10.2	10.3	10.3	9.9	10.1

1/ Annualized percent change from previous quarter for quarterly data, annual percent change for annual data.

Source: Eggert Economic Enterprises, Inc., *Blue Chip Economic Indicators*, August 10, 1988; except 1988 2nd Q GNP growth and GNP deflator which are the preliminary estimates by the U.S. Department of Commerce.

Table 1-2
DBED ECONOMIC FORECAST FOR HAWAII: 1988 AND 1989

[Calendar years]

Economic variable	Actual		Forecast		Average annual percent change	
	1987	Growth from 1986 (percent)	1988	1989	87-88	88-89
Gross state product						
Millions of current dollars	19,779.5p	9.9	21,280.1	22,823.8	7.6	7.3
Millions of constant 1982 dollars ...	16,516.3p	5.2	17,004.1	17,435.6	3.0	2.5
GSP deflator index (1982=100)	119.8p	4.5	125.1	130.9	4.5	4.6
Visitor arrivals (million)	5.8	3.4	6.0	6.3	4.0	4.0
Consumer price index (1982-84=100)	114.9	5.0	120.7	126.7	5.0	5.0
Personal income (millions of constant 1980 dollars)	12,335	2.4	12,649	12,917	2.4	2.1
Personal income (millions of current dollars)	17,116	8.2	18,400	19,730	7.5	7.2
Total jobs (1,000)	508.9	4.5	523.2	536.5	2.8	2.5
Total construction (constant 1972 dollars)	786.6	15.8	841.6	875.2	7.0	4.0

p Preliminary.

Source: Department of Business and Economic Development, Hawaii Econometric Model Project, June 1988.

2. Alternative Five-Year Economic Scenarios for Strategic Planning

Multi-year planning has become an increasingly important activity in both business firms and government agencies. One of the keys to the multi-year planning process is information on trends in the business and economic environment and forecasts for these trends, often extending five years into the future. In addition, the discipline of contemporary "strategic planning" requires the planning effort to address potential threats and opportunities in the future environment and to propose contingency plans for those possibilities. This requires a notion of the alternative paths the future could plausibly take.

For many business and government planning efforts, the course of the economy is a crucial determinant of the plan's ultimate success. Planning efforts typically address the issue of the future economic environment by consulting short-range economic forecasts, of which there are usually a number available (although they may not always agree). Rarely, however, do these forecasts extend beyond a year or two or do they provide alternative forecasts based on different sets of assumptions about the future. Yet, alternative forecasts extending several years into the future could help planners and managers ensure that they are addressing the full range of issues that may impact on the success of the organization's plans.

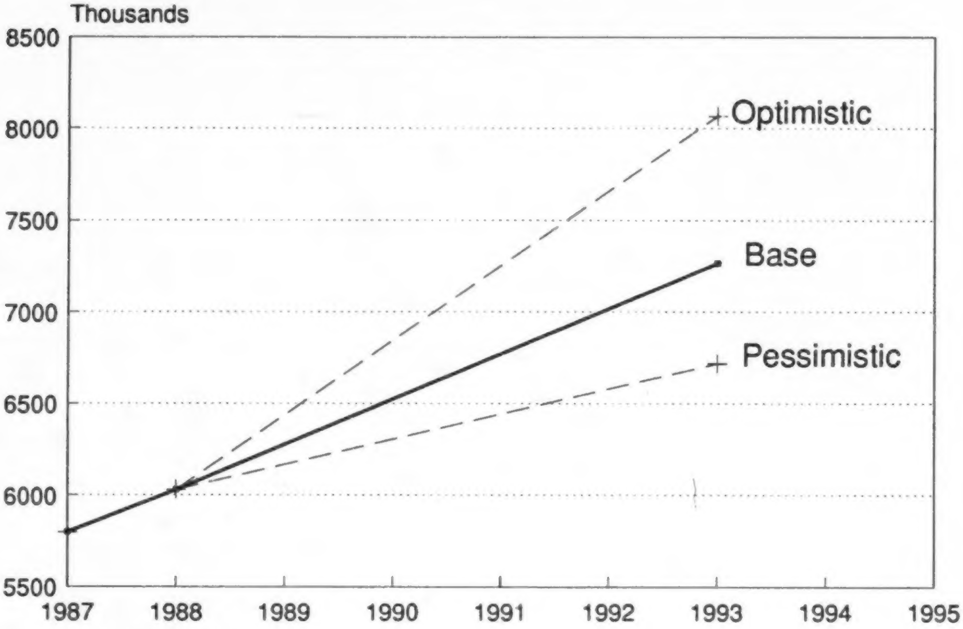
This report attempts to address that need by presenting three plausible economic scenarios ("base," "pessimistic," and "optimistic") for the five-year period 1989 to 1993, their likelihood, and *their major implications.*

The U.S. economy has completed 70 months of economic expansion without a recession, an occurrence unparalleled for the nation during peace time. Actually, the rapid-growth, recovery portion of the post 1981-82 recession subsided in 1985. Since then, the economy has exhibited modest growth of about 3 percent annually. Even though the growth rate since 1985 has been modest, it has been sufficient to reduce the nation's unemployment rate to its lowest level since the early 1970s. The course of the economy since the recovery leveled off has been dominated by international factors such as inflows of foreign capital and the value of the dollar. The current strength of the economy is tied to a resurgence in the nation's export-producing industries prompted by the decline in the dollar.

Despite the recent increase in interest and inflation rates, which may suggest an overheated economy ripe for a slowdown or recession, it is not at all clear what the economy will do next. It is plausible that the economy could be slowed and even slip into recession. It is also plausible that the economy will slow modestly and continue growing at a somewhat slower rate (as appears to be the hope and strategy of the Federal Reserve System). Finally, another plausible course for the economy is continued expansion at its current rate despite the upturn in interest and inflation rates.

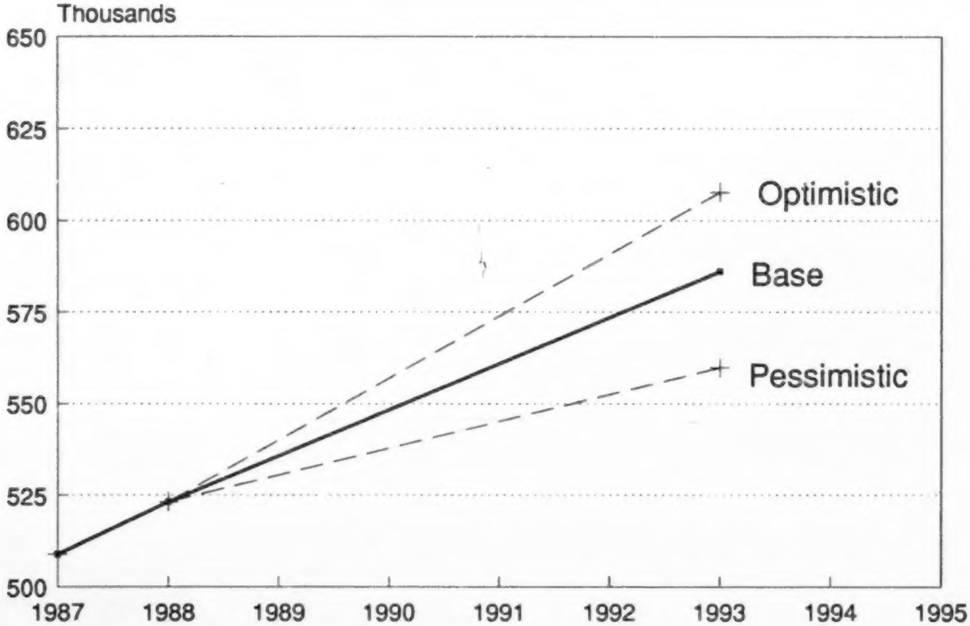
As problematic as the national economic outlook is, interpreting the implications for Hawaii is even more of a problem. Hawaii's

Figure 2-1
VISITOR ARRIVAL FORECASTS TO 1993



Source: DBED, September 1988.

Figure 2-2
TOTAL JOB FORECASTS TO 1993



Source: DBED, September 1988.

primary link with the national economy is the visitor market which is about two-thirds dependent on the expenditures of Mainland visitors. Increases or decreases in the rate of economic growth at the national level are usually followed by some degree of increase or decrease in the growth of Mainland visitor arrivals to Hawaii. However, this relationship can vary greatly, as evidenced by the lack of significant growth in the Mainland visitor market over the last two years despite moderate growth in the U.S. economy. The remaining third of Hawaii's visitor market is foreign in nature and relatively independent of economic growth in the U.S. Forecasting the course of foreign economies (Japan, for instance) is exceptionally difficult and unsure.

Hawaii's construction industry, which is considered the second most powerful force in the State's economy at the present time, is mainly determined by the various sources of construction demand (including foreign investment demand), such as housing and expansion of business facilities. Interest rates are certainly a factor in construction activity. However, the past has indicated that current demand for structures, cost of land acquisition, and confidence (or lack of it) in the long-run prospects for the State's economy--all locally determined factors--are critically important in determining the ups and downs of construction.

Given all this uncertainty, how is it possible to develop forecasts for Hawaii's economy over the next five years with any level of confidence? The solution is to identify the long-term growth trend in the economy. Then, based on a review of recent trends, a determination can be made as to whether the course of the economy in the next few years is likely to be above or below the long-run growth trend. Measures of long-term growth of both the U.S. and Hawaii economies can be estimated from past data by filtering out the influence of the ups and downs of the business cycle. Long-run economic trends are tied to such fundamental factors as population growth, changes in the population mix (demographics), changes in the industry mix often determined by technology advances, and changes in the geographic distribution of the population (mostly resulting from differential migration) which is associated with differences in economic growth rates among the States.

DBED's Research and Economic Analysis Division (READ) maintains econometric models to produce short- and long-range projections for Hawaii's economy. The "base" forecast is prepared using long-run growth assumptions tempered by recent events at the national, international, and State levels that have bearings on those assumptions. Alternative "pessimistic" and "optimistic" forecast scenarios are constructed by varying the expectations for two of the most significant assumptions in the short-run model--tourism and construction--as is explained in detail below.

ALTERNATIVE FORECASTS AND THEIR IMPLICATIONS

The three forecasts presented in Tables 2-1 and 2-2 are designed to establish some likely bounds for the course of the State's economy in the next five years. Table 2-1 shows what the three scenarios would predict for 1993 as well as actual and estimated data for 1987 and 1988, respectively.

The "base" forecast assumes that visitor and construction expenditures will continue to grow moderately at their long-run, expected growth rates of about 4 percent annually. This would be the likely case if the national economy slows slightly, bringing down interest and inflation rates, but not enough to push the economy into a recession. By pushing interest rates up in recent months, the

Federal Reserve Board is following a strategy designed to bring about such a "slowing." The base forecast also assumes that agricultural employment will grow moderately with probable declines in sugar field employment more than offset by increase in sales of other agricultural products. No change in pineapple employment is forecast and U.S. defense expenditures are expected to grow moderately, although defense employment will remain at current levels.

The "pessimistic" scenario assumes that: (1) recessionary conditions will occur at the national and possibly international levels sometime within the next five years and will result in no growth in tourism for two successive years within the five-year forecast period and (2) conditions in the demand for housing and business facilities in Hawaii will result in a downturn for the construction industry, averaging 10 percent per year in real terms over three years during the forecast period. While in terms of the future this is a hypothetical scenario, it actually approximates the performance of these key industries in the recession-plagued 1980-1985 period, thus giving historical credibility to this alternative forecast. No other changes from the base forecast assumptions have been made.

The "optimistic" scenario assumes that overall visitor arrivals and expenditures will increase an average 6 percent per year, while construction will continue at a sustained 7 percent real growth rate over the forecast period. This scenario is plausible if the national economy is able to maintain its current growth rate throughout the forecast period and Hawaii continues to experience economic stimulation from foreign tourism, and foreign and domestic investment activity. As in the pessimistic scenario, all other base forecast assumptions, particularly inflation, have been held constant in order to examine more clearly the role of tourism and construction.

These three alternative forecasts show how wide the range of economic performance in the economy can plausibly be within the next five years. For instance, under the base forecast, total jobs in the State are expected to increase to 586,000, 12 percent over 1988, or an average 2.3 percent per year. If the pessimistic scenario prevails, we would expect an average 1.4 percent annual increase in jobs to under 560,000 jobs by 1993. If, however, the optimistic forecast proves more accurate, the economy could produce jobs at a bullish 3.0 percent per year for a total of nearly 608,000 jobs by 1993.

As can be seen in the annual growth rates of jobs by industry shown in Table 2-2, few sectors of the economy would show absolute declines under the pessimistic scenario over the five-year period. Construction would be the hardest hit with a 20 percent decline in jobs expected. Hotel employment would show no growth under the pessimistic scenario. Durable manufacturing would also see a decline in employment due to the adverse economic environment.

The sectors that would likely be least affected by whichever scenario occurred include government, finance/insurance/real estate, agriculture, and services other than hotels.

LIKELIHOOD OF THE ALTERNATIVE SCENARIOS

As modest as national economic growth has been in the past three years, the economy has shown remarkable stability and resilience. Each time conventional wisdom would suggest that a recession is in the offing, the economy adjusts and continues its modest growth path. There is no shortage of hypotheses (often in conflict with one another) on what factors are most responsible for this seeming stability--stimulation from the prolonged Federal deficit, the success of supply-side economics, and the internationalization of the economy, among others. Unfortunately, the range of explanations tends to cloud the bases for forecasting rather than provide clarification. Generally what forecasters are left with is the seeming stability of the current growth cycle, and they appear inclined to forecast its continuation in the absence of clear indications that the growth at current rates cannot continue.

READ is inclined, therefore, to assign a roughly 50 percent probability to the likelihoood that growth in the next five years will more closely approximate the base forecast presented above rather than the pessimistic or optimistic alternatives.

If, however, the economy does change course significantly during the next five years, the most likely direction of performance is below the base forecast rather than above it. This bias is based on such current conditions in the economy as the low unemployment rate and high utilization of industrial capacity which suggest constraints on accelerated growth. This is especially true for Hawaii where labor and physical resources are apparently tighter by a considerable degree than for the nation as a whole.

READ has assigned a probability of 40 percent and 10 percent, respectively, to the pessimistic and optimistic scenarios. In other words, there is judged to be a 40 percent probability that the actual growth of the State's economy will more closely approximate the pessimistic scenario than the base forecast and a 10 percent probability with respect to the optimistic scenario.

There are other limitations on how realistic these scenarios will represent actual economic performance. First, as indicated earlier, population, interest rates, and inflation have been held constant in all three forecasts. Conventional wisdom would suggest a decrease in these factors if the economy slows and increases if growth accelerates. However, the magnitude of expected change in these variables is very uncertain as is the ultimate impact on income and employment. Since their inclusion in the scenarios would cloud interpretation, they were purposely omitted.

IMPLICATIONS FOR PLANNING

It is likely that the actual overall performance of the economy over the next five years will fall somewhere between the pessimistic and optimistic forecasts presented here. It is also likely that regardless of the overall performance, some individual industries will perform closer to the pessimistic scenario while others may achieve the performance predicted in the optimistic outlook.

The real issue for planning is not choosing a particular forecast but, rather, determining what the strategies of the organization should be under the range of plausible forecasts. What would be the impact on the organization and its objectives under the pessimistic forecast? What problems would that scenario bring? What opportunities might it bring? What actions could the organization take now to meet that challenge? On the other hand, how can the organization meet the demands of the optimistic scenario? Where will it acquire its capital and labor resources, its materials? Or what technological innovations might the organization implement to meet the challenge? Is now the best time to make that investment?

A range of plausible growth trends clearly raises a host of issues which are not apparent when planning is predicated on a single "base" forecast. It is hoped that the presentation of such alternative forecasts and their interpretation will help managers and planners better address those issues.

Table 2-1
ALTERNATIVE FIVE-YEAR FORECASTS TO 1993

			1993		
Variable	**1987**	**1988e**	**Base**	**Pessimistic**	**Optimistic**
Visitor arrivals (1,000)	5,797.6	6,029.5	7,265.4	6,717.3	8,068.1
Construction expenditures (constant 1972 dollars)	786.6	841.6	1,023.9	663.6	1,180.3
Total jobs (1,000)	508.9	523.2	586.1	559.8	607.7
Agriculture	10.5	10.5	10.7	10.7	10.7
Construction	21.0	22.4	26.2	18.0	29.5
Manufacturing	22.1	21.7	21.7	21.0	22.1
Durable	4.0	4.0	4.6	3.9	4.8
Nondurable	18.1	17.7	17.2	17.1	17.2
Transportation	26.7	27.4	31.3	29.5	33.7
Communication & utilities	9.8	9.8	9.8	9.8	9.8
Trade	123.4	127.2	145.7	138.7	152.7
Retail	103.0	106.1	122.4	115.6	129.3
Eating & drinking	43.8	45.3	53.5	52.1	55.4
Finance, insurance & real estate	34.0	34.9	39.6	38.9	40.0
Services	126.4	132.5	155.1	148.2	162.5
Hotel	31.0	31.7	35.1	31.7	40.0
Other	95.4	100.8	120.0	116.5	122.5
Government	95.6	96.9	103.6	103.6	103.6
Self employed	39.4	39.9	42.4	41.3	43.2
Personal income (millions of current dollars)	17,116.4	18,400.0	25,909.8	25,162.5	26,455.0
Personal income (millions of constant dollars)	12,355.0	12,649.0	13,955.9	13,553.3	14,249.5
Honolulu CPI (1982-84=100)	114.9	120.6	153.9	153.9	153.9
Average home mortgage rate (%)	10.5	10.5	10.5	10.5	10.5

e Estimate.
Source: DBED, Research and Economic Analysis Division, September 1988.

Table 2-2
GROWTH RATES, OVERALL AND AVERAGE ANNUAL, FOR ALTERNATIVE SCENARIOS: 1988 TO 1993

[Percent]

Variable	Total growth			Average annual growth		
	Base	Pessimistic	Optimistic	Base	Pessimistic	Optimistic
Visitor arrivals	20.5	11.4	33.8	3.8	2.2	6.0
Construction expenditures (constant dollars)	21.7	-21.2	40.2	4.0	-4.6	7.0
Total jobs	12.0	7.0	16.2	2.3	1.4	3.0
Agriculture	1.9	1.9	1.9	0.4	0.4	0.4
Construction	17.0	-19.6	31.7	3.2	-4.3	5.7
Manufacturing	0	-3.2	1.8	0	-0.7	0.4
Durable	15.0	-2.5	20.0	2.8	-0.5	3.7
Nondurable	-2.8	-3.4	-2.8	-0.6	-0.7	-0.6
Transportation	14.2	7.7	23.0	2.7	1.5	4.2
Communication & utilities	0.0	0.0	0.0	0.0	0.0	0.0
Trade	14.5	9.0	20.0	2.8	1.8	3.7
Retail	15.4	9.0	21.9	2.9	1.7	4.0
Eating & drinking	18.1	15.0	22.3	3.4	2.8	4.1
Finance, insurance & real estate	13.5	11.5	14.6	2.6	2.2	2.8
Services	17.1	11.8	22.6	3.2	2.3	4.2
Hotel	10.7	0.0	26.2	2.1	0.0	4.8
Other	19.0	15.6	21.5	3.6	2.9	4.0
Government	6.9	6.9	6.9	1.4	1.4	1.4
Self employed	6.3	3.5	8.3	1.2	0.7	1.6
Personal income (current dollars)	40.8	36.8	43.8	7.1	6.5	7.5
Personal income (constant dollars)	10.3	7.1	12.7	2.0	1.4	2.4
Honolulu Consumer Price Index	27.6	27.6	27.6	5.0	5.0	5.0

Source: DBED, Research and Economic Analysis Division.

3. Income and Prices

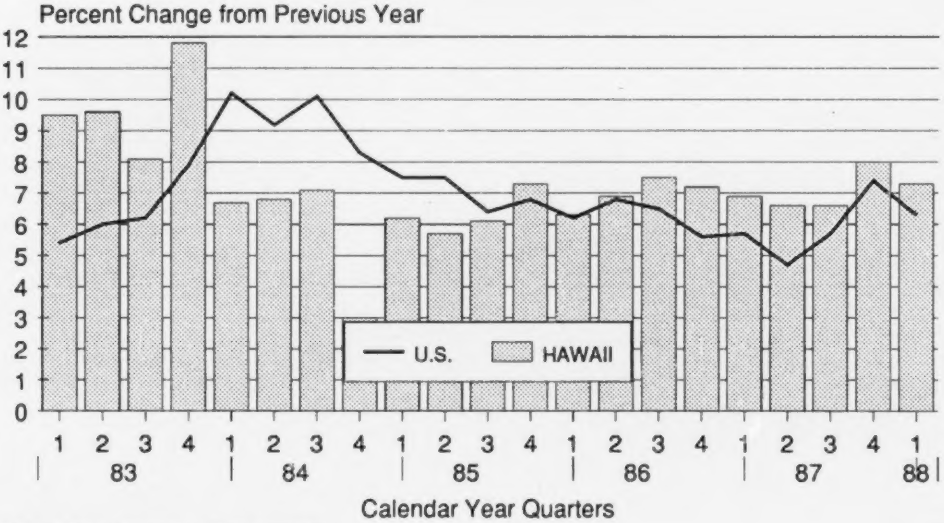
According to recent estimates by the Bureau of Economic Analysis, first quarter personal income in Hawaii increased 7.3 percent from the first quarter of 1987. This is comparable to the 7 percent growth rate for 1987 and above the.U.S. personal income growth of 6.3 percent during the first quarter of 1988.

Total and per capita personal income by county (Tables 3-2 and 3-3) reflect the long-standing disparity between Oahu and the Neighbor Islands. Although the economies of the Neighbor Island counties have shown improvement in recent years, per capita personal income in 1986 ranged from 78.7 percent to 90.4 percent of the State average, while Oahu was 4.9 percent above the State average. Per capita income for the Neighbor Islands exceeded Oahu only in 1974 (Figure 3-2) when soaring sugar prices increased farm income.

The Honolulu Consumer Price Index (CPI-U) increased by 6.0 percent during the first half of 1988. During the same period, the CPI for the nation increased only 3.9 percent. Higher food and housing prices in Honolulu had a significant role in the Honolulu CPI jump, increasing 4.9 percent and 6.8 percent, respectively (Table 3-4).

Figure 3-1

GROWTH IN PERSONAL INCOME:
U.S. AND HAWAII



SOURCE: DBED, Based on data from the Dept of Commerce, Bureau of Economic Analysis

Table 3-1
TOTAL PERSONAL INCOME FOR THE UNITED STATES AND HAWAII: 1980 TO 1988

[In millions of dollars and percent]

Year	Total personal income 1/		Percent change from same period in previous year	
	United States	Hawaii	United States	Hawaii
1980	2,254,076	10,279	11.1	13.8
1981	2,514,231	11,051	11.5	7.5
1982	2,663,432	11,732	5.9	6.2
1983	2,834,385	12,875	6.4	9.7
1984	3,101,163	13,628	9.4	5.8
1985	3,320,346	14,555	7.1	6.8
1986	3,528,589	15,572	6.3	7.0
1987	3,736,318	16,666	5.9	7.0
1985:				
1st Q	3,252,664	14,241	7.5	6.2
2nd Q	3,298,599	14,424	7.5	5.7
3rd Q	3,330,473	14,638	6.4	6.1
4th Q	3,399,647	14,917	6.8	7.3
1986:				
1st Q	3,454,989	15,138	6.2	6.3
2nd Q	3,522,863	15,415	6.8	6.9
3rd Q	3,547,282	15,742	6.5	7.5
4th Q	3,589,223	15,991	5.6	7.2
1987:				
1st Q	3,652,506	16,189	5.7	6.9
2nd Q	3,688,316	16,435	4.7	6.6
3rd Q	3,749,283	16,775	5.7	6.6
4th Q	3,855,169	17,265	7.4	8.0
1988:				
1st Q	3,884,290	17,373	6.3	7.3

1/ Quarterly income seasonally adjusted at annual rates.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, news release dated July 20, 1988 and diskettes dated April 1988.

Table 3-2
TOTAL PERSONAL INCOME, BY COUNTIES: 1969 TO 1986

[Millions of dollars]

Year	State total	City and County of Honolulu	Other counties			
			Total	Hawaii	Kauai	Maui and Kalawao
1969	3,277.4	2,782.4	494.9	219.0	112.1	163.8
1970	3,771.8	3,194.4	577.4	262.3	121.2	193.9
1971	4,059.7	3,419.9	639.8	292.6	133.2	214.0
1972	4,473.3	3,772.3	701.1	322.6	142.6	235.8
1975	4,967.5	4,193.1	774.4	356.3	157.7	260.4
1974	5,702.4	4,630.5	1,071.9	497.9	219.3	354.8
1975	6,159.0	5,090.3	1,068.7	489.0	207.8	371.9
1976	6,669.7	5,521.6	1,148.0	513.0	220.5	414.6
1977	7,209.5	5,939.9	1,269.6	564.3	240.9	464.3
1978	8,043.1	6,618.5	1,424.6	636.0	273.2	515.3
1979	9,030.9	7,395.5	1,635.4	724.4	313.0	598.0
1980	10,279.2	8,293.1	1,986.2	901.3	374.4	710.5
1981	11,051.4	9,039.9	2,011.4	895.8	378.3	737.3
1982	11,731.7	9,570.6	2,161.1	948.9	406.6	805.7
1983	12,875.3	10,396.3	2,479.0	1,080.7	462.7	935.5
1984	13,627.9	11,063.9	2,564.0	1,117.3	471.7	975.1
1985	14,555.0	11,792.0	2,763.1	1,186.8	513.0	1,063.3
1986	15,571.5	12,561.5	3,010.0	1,288.9	560.8	1,160.3
	Percent change from previous year					
1970	15.1	14.8	16.7	19.8	8.1	18.4
1971	7.6	7.1	10.8	11.6	9.9	10.4
1972	10.2	10.3	9.6	10.3	7.1	10.2
1973	11.0	11.2	10.5	10.4	10.6	10.4
1974	14.8	10.4	38.4	39.7	39.1	36.3
1975	8.0	9.9	-0.3	-1.8	-5.2	4.8
1976	8.3	8.5	7.4	4.9	6.1	11.5
1977	8.1	7.6	10.6	10.0	9.3	12.0
1978	11.6	11.4	12.2	12.7	13.4	11.0
1979	12.3	11.7	14.8	13.9	14.6	16.0
1980	13.8	12.1	21.5	24.4	19.6	18.8
1981	7.5	9.0	1.3	-0.6	1.0	3.8
1982	6.2	5.9	7.4	5.9	7.5	9.3
1983	9.7	8.6	14.7	13.9	13.8	16.1
1984	5.8	6.4	3.4	3.4	1.9	4.2
1985	6.8	6.6	7.8	6.2	8.8	9.0
1986	7.0	6.5	8.9	8.6	9.3	9.1

Source: U.S. Department of Commerce, Bureau of Economic Analysis, printout dated April 1988.

Table 3-3
PER CAPITA PERSONAL INCOME, BY COUNTIES: 1969 TO 1986

[Dollars]

Year	State total	City and County of Honolulu	Other counties			
			Total	Hawaii	Kauai	Maui and Kalawao
1969	4,411	4,611	3,548	3,470	3,732	3,530
1970	4,944	5,121	4,148	4,127	4,091	4,217
1971	5,129	5,402	4,037	3,980	4,007	4,133
1972	5,468	5,674	4,573	4,614	4,476	4,580
1975	5,901	6,132	4,899	4,890	4,847	4,942
1974	6,645	6,634	6,695	6,738	6,739	6,611
1975	7,038	7,191	6,392	6,333	6,241	6,563
1976	7,474	7,702	6,544	6,374	6,341	6,890
1977	7,873	8,082	7,022	6,831	6,803	7,398
1978	8,660	8,938	7,566	7,425	7,444	7,814
1979	9,506	9,816	8,318	8,133	8,234	8,600
1980	10,617	10,854	9,727	9,682	9,499	9,916
1981	11,275	11,765	9,501	9,232	9,308	9,944
1982	11,760	12,292	9,868	9,472	9,703	10,477
1983	12,640	13,107	10,993	10,526	10,764	11,724
1984	13,154	13,805	10,934	10,438	10,691	11,688
1985	13,842	14,538	11,494	10,835	11,304	12,440
1986	14,658	15,380	12,256	11,533	12,107	13,254
	Percent change from previous year					
1970	12.1	11.1	16.9	18.9	9.6	19.5
1971	3.7	5.5	-2.7	-3.6	-2.1	-2.0
1972	6.6	5.0	13.3	15.9	11.7	10.8
1973	7.9	8.1	7.1	6.0	8.3	7.9
1974	12.6	8.2	36.7	37.8	39.0	33.8
1975	5.9	8.4	-4.5	-6.0	-7.4	-0.7
1976	6.2	7.1	2.4	0.6	1.6	5.0
1977	5.3	4.9	7.3	7.2	7.3	7.4
1978	10.0	10.6	7.7	8.7	9.4	5.6
1979	9.8	9.8	9.9	9.5	10.6	10.1
1980	11.7	10.6	16.9	19.0	15.4	15.3
1981	6.2	8.4	-2.3	-4.6	-2.0	0.3
1982	4.3	4.5	3.9	2.6	4.2	5.4
1983	7.5	6.6	11.4	11.1	10.9	11.9
1984	4.1	5.3	-0.5	-0.8	-0.7	-0.3
1985	5.2	5.3	5.1	3.8	5.7	6.4
1986	5.9	5.8	6.6	6.4	7.1	6.5

Continued on next page.

Table 3-3
PER CAPITA PERSONAL INCOME, BY COUNTIES: 1969 TO 1986 -- Con.

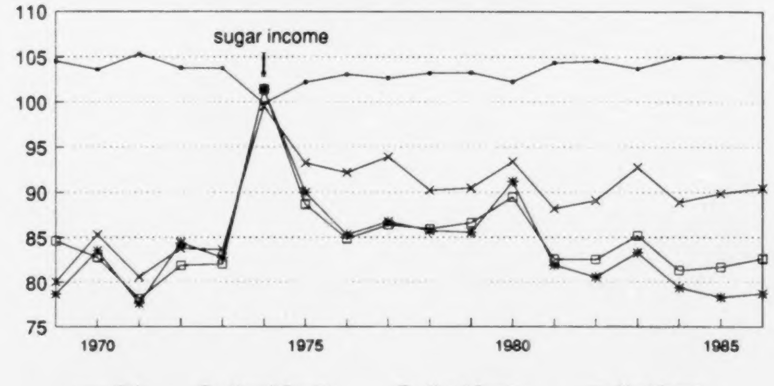
[Percent of State]

Year	State total	City and County of Honolulu	Other counties			
			Total	Hawaii	Kauai	Maui and Kalawao
1969	100	104.5	80.4	78.7	84.6	80.0
1970	100	103.6	83.9	83.5	82.7	85.3
1971	100	105.3	78.7	77.6	78.1	80.6
1972	100	103.8	83.6	84.4	81.9	83.8
1973	100	103.9	83.0	82.9	82.1	83.7
1974	100	99.8	100.8	101.4	101.4	99.5
1975	100	102.2	90.8	90.0	88.7	93.3
1976	100	103.1	87.6	85.3	84.8	92.2
1977	100	102.7	89.2	86.8	86.4	94.0
1978	100	103.2	87.4	85.7	86.0	90.2
1979	100	103.3	87.5	85.6	86.6	90.5
1980	100	102.2	91.6	91.2	89.5	93.4
1981	100	104.3	84.3	81.9	82.6	88.2
1982	100	104.5	83.9	80.5	82.5	89.1
1983	100	103.7	87.0	83.3	85.2	92.8
1984	100	104.9	83.1	79.4	81.3	88.9
1985	100	105.0	83.0	78.3	81.7	89.9
1986	100	104.9	83.6	78.7	82.6	90.4

Source: U.S. Department of Commerce, Bureau of Economic Analysis, printout dated April 1988.

Figure 3-2

PER CAPITA PERSONAL INCOME BY COUNTY:
1969 to 1986 (Percent of State)



Source: DBED, Based on data from the Dept of Commerce, Bureau of Economic Analysis

Table 3-4
CONSUMER PRICE INDEX, ALL URBAN CONSUMERS (CPI-U) FOR SELECTED ITEMS FOR HONOLULU: 1980 TO 1988

[1982-84 = 100]

Period 1/	All items	Food & beverage	Housing 2/	Apparel and upkeep	Transportation	Medical care	Entertainment	Other
Honolulu:								
1980	83.0	84.2	83.2	89.8	86.6	73.1	78.2	73.3
1981	91.7	92.6	92.3	94.5	95.7	81.8	87.2	81.5
1982	97.2	96.9	98.0	98.4	99.0	91.6	95.7	92.0
1983	99.3	99.5	98.9	101.4	98.2	101.1	100.0	101.4
1984	103.5	103.6	103.1	100.2	102.9	107.3	104.3	106.6
1985	106.8	107.8	106.0	99.6	104.9	113.2	111.9	112.5
1986	109.4	110.0	108.4	99.8	105.2	122.3	113.2	119.6
1987	114.9	114.1	115.0	102.5	109.7	127.9	118.6	129.7
1986:								
1st half	108.9	108.8	108.0	99.4	106.0	120.2	115.5	116.6
2nd half	109.9	111.2	108.9	100.2	104.4	124.5	110.9	122.5
1987:								
1st half	113.3	113.3	113.4	101.0	107.3	126.5	116.3	127.0
2nd half	116.5	115.0	116.5	104.1	112.1	129.2	120.9	132.4
1988:								
1st half	120.1	118.9	121.1	105.7	114.2	130.3	123.1	135.0
% increase (Honolulu):								
1980-81	10.5	10.0	10.9	5.2	10.5	11.9	11.5	11.2
1981-82	6.0	4.6	6.2	4.1	3.4	12.0	9.7	12.9
1982-83	2.2	2.7	0.9	3.0	-0.8	10.4	4.5	10.2
1983-84	4.2	4.1	4.2	-1.2	4.8	6.1	4.3	5.1
1984-85	3.2	4.1	2.8	-0.6	1.9	5.5	7.3	5.5
1985-86	2.4	2.0	2.3	0.2	0.3	8.0	1.2	6.3
1986-87	5.0	3.7	6.1	2.7	4.3	4.6	4.8	8.4
1st half	4.0	4.1	5.0	1.6	1.2	5.2	0.7	8.9
2nd half	6.0	3.4	7.0	3.9	7.4	3.8	9.0	8.1
1987-88:								
1st half	6.0	4.9	6.8	4.7	6.4	3.0	5.8	6.3

1/ Beginning with 1987, the Honolulu CPI-U is available semi-annually only.

2/ Change in calculation in 1983--housing costs measured in rental equivalence (what owners would have to pay if they rented their homes).

Source: U.S. Department of Labor, Bureau of Labor Statistics.

4. Employment

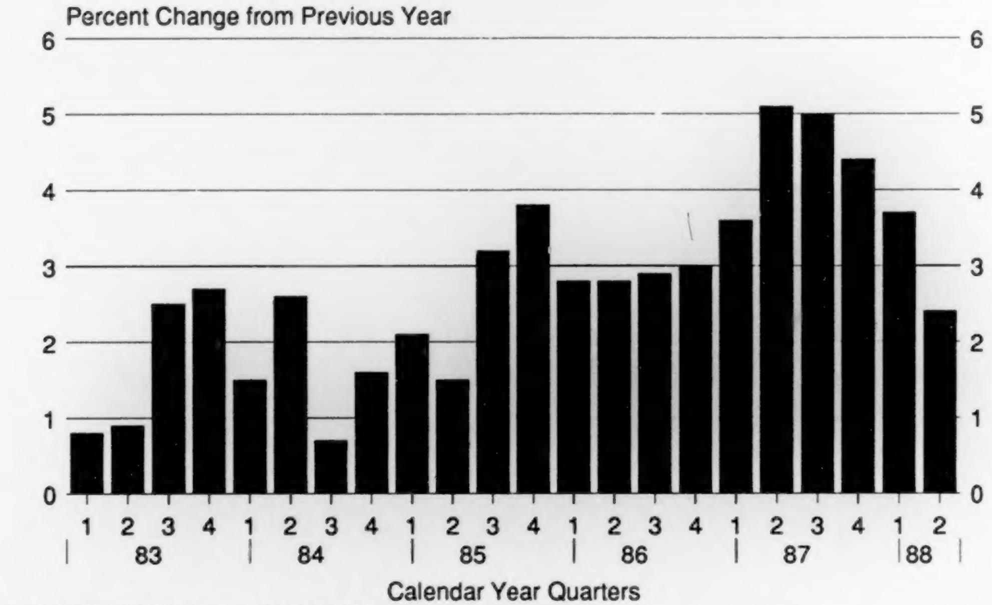
Preliminary job count data showed a 3.0 percent increase in total jobs in the January to June period of 1988. Hotels and pineapple processing have shown the largest percentage gain in employment among the industries.

Kauai lead all other counties in job growth. Non-agricultural wage and salary jobs in Kauai County increased by 8.4 percent during the first six months of 1988 compared with a 2.1 percent increase for the State as a whole.

Unemployment in Hawaii reached its lowest quarterly rate on record, 3.0 percent during the second quarter of 1988, and was the fourth lowest in the nation. For the first half of 1988, the unemployment rate declined to 3.2 percent from a 3.8 percent figure in 1987 and a high of 6.7 percent during the last recession of 1982.

Figure 4-1

GROWTH IN TOTAL JOBS



SOURCE: DBED, Based on data from the Dept. of Labor and Industrial Relations

Table 4-1
TOTAL JOBS: 1980 TO 1988

Year	Total jobs 1/	Nonagriculture			Agriculture			Labor disputes
		Total	Wage & salary	Self-employed	Total	Wage & salary	Self-employed	
1980	448,150	432,400	404,100	28,300	15,400	10,800	4,600	500
1981	449,900	433,950	404,800	29,150	15,850	11,500	4,350	50
1982	446,050	430,700	399,400	31,300	15,250	11,300	4,000	100
1983	453,750	438,500	406,200	32,300	15,100	11,200	3,900	150
1984	461,000	446,100	412,650	33,450	14,450	10,800	3,650	450
1985	473,150	459,150	425,750	33,400	13,900	10,400	3,500	100
1986	486,850	473,300	438,550	34,750	13,350	10,150	3,200	200
1987 (p)	508,900	494,600	458,950	35,650	14,250	10,550	3,700	50
1988 (Jan-June) (p)	517,500	503,900	466,950	36,950	13,500	10,000	3,500	50
1987(p):								
1st Q	496,050	482,700	451,900	30,800	13,350	10,000	3,350	-
2nd Q	508,450	494,250	458,500	35,750	14,150	10,500	3,650	50
3rd Q	509,900	494,450	458,200	36,250	15,400	11,300	4,100	50
4th Q	517,700	503,700	467,250	36,450	13,950	10,350	3,600	50
1988 (p):								
1st Q	514,300	500,800	465,700	35,100	13,450	10,000	3,450	50
2nd Q	520,750	507,100	468,250	38,850	13,600	10,000	3,600	50
	Percent change from the same period in previous year							
1980	3.2	3.4	2.6	16.2	1.1	0.5	2.2	-28.6
1981	0.3	0.4	0.2	3.0	2.9	8.4	-5.4	-90.0
1982	-0.9	-0.7	-1.3	7.4	-3.8	-2.2	-9.2	100.0
1983	1.7	1.8	1.7	3.2	-1.3	-0.9	-1.3	50.0
1984	1.6	1.7	1.6	3.6	-4.0	-3.6	-6.4	200.0
1985	2.6	2.9	3.2	-0.2	-3.8	-3.5	-4.4	-77.8
1986	2.9	3.1	3.0	4.0	-4.0	-2.4	-8.6	100.0
1987 (p)	4.5	4.5	4.6	2.6	6.7	3.9	15.6	-75.0
1988 (Jan-June) (p)	3.0	3.2	2.6	11.1	-1.8	-2.4	0.2	0.0
1987 (p):								
1st Q	3.6	3.6	4.4	-6.8	4.2	1.5	11.7	0.0
2nd Q	5.1	5.0	5.2	1.9	10.7	5.5	28.1	0.0
3rd Q	4.3	4.2	4.6	-0.1	7.7	4.1	18.8	0.0
4th Q	4.5	4.5	4.4	6.1	3.3	3.5	2.9	-91.7
1988 (p):								
1st Q	3.7	3.7	3.1	14.0	0.7	-0.2	2.5	0.0
2nd Q	2.4	2.6	2.1	8.7	-3.9	-4.5	-1.8	0.0

p Preliminary.

1/ Total of wage and salary jobs and self-employed in agricultural and nonagricultural industries plus those jobs involved in labor disputes.

Source: Hawaii State Department of Labor and Industrial Relations.

Table 4-2
NUMBER OF JOBS, BY INDUSTRY: 1986 TO 1988

Series	1986	1987	(Jan. - June) 1988	Percent change from previous year 1986	1987	1988
Total jobs 1/	486,850	508,900	517,500	2.9	4.5	3.0
Non-agricultural wage and salary jobs	438,550	458,950	466,950	3.0	4.6	2.6
Construction	18,650	20,950	20,300	8.7	12.3	-2.9
Manufacturing	22,050	22,100	21,900	0.7	0.2	0.0
Durable goods	3,750	3,950	4,050	1.4	5.3	5.2
Nondurable goods	18,250	18,150	17,900	0.0	-0.5	-1.1
Food processing	10,100	10,100	9,900	0.0	0.0	-0.5
Sugar processing	3,300	3,100	3,000	-4.3	-6.1	-4.7
Pineapple processing	2,000	2,050	2,000	5.3	2.5	4.3
Other food processing	4,850	4,950	4,900	3.2	2.1	0.9
Transp. commun., utilities	34,200	36,650	36,750	3.0	7.2	1.3
Trade	117,950	123,350	125,000	2.0	4.6	2.6
Wholesale	19,550	20,400	20,550	0.0	4.3	1.9
Retail	98,400	102,950	104,450	2.4	4.6	2.8
Finance, insur., real estate	33,150	33,950	34,400	3.9	2.4	2.3
Services	118,750	126,350	129,650	5.4	6.4	4.2
Hotels	29,250	31,000	32,600	0.9	6.0	7.5
Government	93,850	95,600	99,000	0.6	1.9	2.8
Federal	32,100	32,350	32,600	-0.9	0.8	1.6
State	48,600	49,900	52,950	2.5	2.7	3.2
Local	13,150	13,400	13,450	-2.6	1.9	4.3
Agriculture (wage & salary)	10,150	10,550	10,000	-2.4	3.9	-2.4
Sugar	4,000	3,800	3,700	-2.4	-5.0	-2.6
Pineapple	2,050	1,900	1,700	5.1	-7.3	-8.5
Diversified agriculture	4,100	4,800	4,600	-5.7	17.1	0.7
Nonagric. self-employed 2/	34,750	35,650	36,950	4.0	2.6	11.1
Agricultural self-employed 2/	3,200	3,700	3,500	-8.6	15.6	0.2
Labor disputes	200	50100.0	50	100.0	-75.0	0.0

1/ Total of nonagricultural and agricultural wage and salary, self-employed, and jobs involved in labor disputes.

2/ Self-employed includes unpaid family workers and domestics.

Source: Hawaii State Department of Labor and Industrial Relations.

Table 4-3
NON-AGRICULTURAL WAGE AND SALARY JOBS, BY COUNTY: 1980 TO 1988

Year	State	City & County of Honolulu	Hawaii County	Kauai County	Maui County
1980	404,100	333,050	28,450	15,150	27,500
1981	404,800	332,300	28,850	15,200	28,450
1982	399,400	325,700	28,700	15,150	29,900
1983	406,200	330,100	29,350	15,700	31,050
1984	412,650	334,400	30,400	15,700	32,150
1985	425,750	342,300	32,250	16,700	34,550
1986	438,550	351,450	33,150	17,900	36,050
1987 (p)	458,950	366,150	35,100	19,250	38,400
1988 (Jan-June) (p)	466,950	372,300	35,700	20,500	38,500
1987 (p):					
1st Q	451,900	360,600	34,600	18,600	38,100
2nd Q	458,450	366,100	35,100	18,950	38,250
3rd Q	458,150	364,950	35,250	19,300	38,700
4th Q	467,200	372,850	35,550	20,250	38,600
1988 (p):					
1st Q	465,700	371,050	35,650	20,450	38,500
2nd Q	468,250	373,500	35,700	20,550	38,500
	Percent change from same period in previous year				
1980	2.6	2.2	2.9	6.1	4.3
1981	0.2	-0.2	1.4	0.6	3.5
1982	-1.3	-2.0	-0.5	-0.6	5.0
1983	1.7	1.4	2.3	3.9	4.0
1984	1.6	1.3	3.6	0.1	3.5
1985	3.2	2.4	6.0	6.1	7.4
1986	3.0	2.7	2.9	7.2	4.4
1987 (p)	4.6	4.2	5.9	7.7	6.6
1988 (Jan-June) (p)	2.6	2.5	2.4	9.3	0.8
1987 (p):					
1st Q	4.4	3.8	5.6	6.7	7.8
2nd Q	5.2	4.7	7.0	8.2	7.4
3rd Q	4.6	4.1	6.4	6.0	6.3
4th Q	4.4	4.1	4.5	10.1	4.8
1988 (p)					
1st Q	3.1	2.9	3.0	10.1	1.0
2nd Q	2.1	2.0	1.7	8.4	0.6

p Preliminary.
Source: Hawaii State Department of Labor and Industrial Relations.

Table 4-4
CIVILIAN LABOR FORCE AND EMPLOYMENT, BY COUNTY: 1980 TO 1988

[Number of persons]

Subject and year	State	City & County of Honolulu	Hawaii County	Kauai County	Maui County
Civilian labor force:					
1980	439,000	338,350	43,550	19,550	37,550
1981	451,000	345,700	45,450	20,100	39,800
1982	461,000	350,100	47,200	20,850	42,900
1983	472,000	357,100	48,350	21,650	44,850
1984	472,000	357,100	48,650	21,300	44,950
1985	479,000	359,600	50,400	22,050	46,950
1986	492,000	368,700	51,350	23,400	48,600
1987	514,000	384,100	54,150	25,000	51,750
1988 (Jan-June)	525,600	392,350	55,000	26,600	51,650
1987: 1st Q	500,550	373,850	52,100	23,750	50,850
2nd Q	516,300	385,200	54,550	24,800	51,850
3rd Q	520,100	386,850	55,650	25,200	52,350
4th Q	523,050	390,600	54,350	26,250	51,900
1988: 1st Q	525,950	392,450	54,950	26,550	52,000
2nd Q	525,250	392,250	55,050	26,650	51,300
Civilian employment:					
1980	418,000	322,800	40,850	18,700	35,650
1981	427,000	328,500	42,150	18,900	37,450
1982	430,000	328,600	42,700	19,150	39,600
1983	442,000	336,550	44,050	20,000	41,450
1984	445,000	338,050	44,900	19,800	42,250
1985	452,000	341,150	46,150	20,550	44,150
1986	468,000	352,500	47,500	22,000	46,050
1987	495,000	370,600	51,050	23,900	49,450
1988 (Jan-June)	508,650	381,100	52,200	25,550	49,800
1987: 1st Q	480,550	360,050	49,150	22,700	48,700
2nd Q	495,150	371,150	50,950	23,650	49,450
3rd Q	500,400	373,450	52,500	24,250	50,200
4th Q	503,900	377,700	51,700	25,000	49,550
1988: 1st Q	507,750	380,200	52,150	25,500	49,900
2nd Q	509,550	381,950	52,300	25,650	49,700

Source: Hawaii State Department of Labor and Industrial Relations.

Table 4-5
CIVILIAN UNEMPLOYED AND UNEMPLOYMENT RATE, BY COUNTY: 1980 TO 1988

[Number of persons]

Subject and year	State	City & County of Honolulu	Hawaii County	Kauai County	Maui County
Civilian unemployed (persons):					
1980	21,000	15,550	2,700	850	1,900
1981	24,000	17,150	3,300	1,150	2,350
1982	31,000	21,500	4,500	1,700	3,300
1983	30,000	20,600	4,300	1,650	3,400
1984	27,000	19,100	3,750	1,500	2,700
1985	27,000	18,450	4,250	1,500	2,800
1986	24,000	16,200	3,850	1,400	2,550
1987	20,000	13,550	3,100	1,100	2,250
1988 (Jan-June)	16,900	11,300	2,800	1,000	1,850
1987: 1st Q	20,000	13,800	2,950	1,050	2,150
2nd Q	21,200	14,050	3,600	1,150	2,400
3rd Q	19,700	13,400	3,150	950	2,200
4th Q	19,150	12,900	2,650	1,250	2,350
1988: 1st Q	18,200	12,250	2,850	1,050	2,100
2nd Q	15,650	10,300	2,750	1,000	1,600
Unemployment rate (percent):					
1980	4.9	4.6	6.2	4.3	5.1
1981	5.4	5.0	7.3	5.8	5.9
1982	6.7	6.1	9.5	8.1	7.7
1983	6.5	5.8	8.9	7.7	7.6
1984	5.6	5.3	7.7	7.0	6.0
1985	5.6	5.1	8.5	6.7	5.9
1986	4.8	4.4	7.5	6.0	5.3
1987	3.8	3.5	5.7	4.4	4.4
1988 (Jan-June)	3.2	2.9	5.1	3.8	3.6
1987: 1st Q	4.0	3.7	5.7	4.4	4.2
2nd Q	4.1	3.6	6.6	4.6	4.6
3rd Q	3.8	3.5	5.7	3.8	4.2
4th Q	3.7	3.3	4.9	4.8	4.5
1988: 1st Q	3.5	3.1	5.2	4.0	4.0
2nd Q	3.0	2.6	5.0	3.8	3.1

Source: Hawaii State Department of Labor and Industrial Relations.

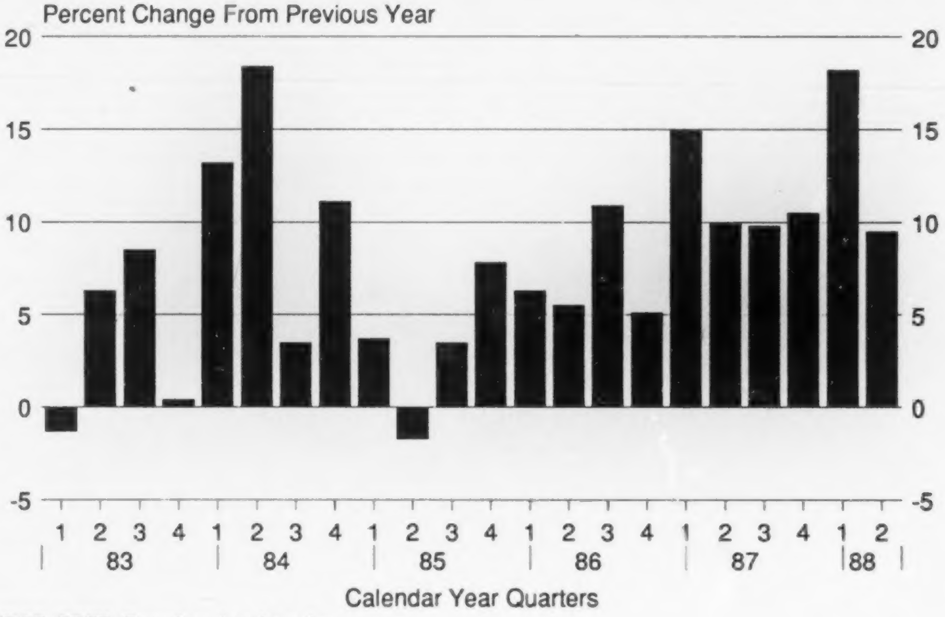
5. Business Activity

The value of business transactions subject to the State excise and use tax increased by 13.9 percent in the first six months of 1988. All major industries contributed to this growth. Retailing, services, and diversified agriculture showed growth rates of 15 to 16 percent while hotel rentals grew 4.6 percent. Activity in the construction industry surged 22 percent in the first half of 1988 (see Table 7-1).

Monthly retail trade reports from the U.S. Bureau of the Census reveal continued growth in the Oahu retail market. Total sales for the 22 department stores on Oahu for the first half of 1988 are estimated to be over $300 million, 9 percent higher than the same period last year. Total department store sales for 1987 exceeded $636 million.

Figure 5-1

GROWTH IN TAXABLE BUSINESS TRANSACTIONS



SOURCE: DBED, Based on data from the Dept. of Taxation

Table 5-1
VALUE OF BUSINESS TRANSACTIONS SUBJECT TO STATE EXCISE AND USE TAX: 1980 TO 1988

[Millions of dollars]

Year	Total taxable transactions	Selected industry transactions				
		Retailing	Services	Hotel rental	Diversified agriculture	Manufacturing
1980	18,966.2	6,075.5	1,750.1	720.7	141.3	620.1
1981	20,903.8	6,690.7	1,792.1	759.4	173.3	615.9
1982	20,722.1	7,043.6	1,976.2	875.5	176.8	544.3
1983	21,416.8	7,458.8	2,128.5	858.2	221.6	502.3
1984	23,879.9	8,182.7	2,396.1	1,008.6	257.6	530.1
1985	24,630.3	8,605.2	2,529.7	1,153.4	251.6	538.3
1986	26,335.2	9,206.7	2,786.1	1,227.2	258.8	565.4
1987	29,232.3	10,010.4	3,057.4	1,434.8	264.2	588.3
1988 (Jan-June)	16,120.7	5,397.3	1,681.2	753.7	161.5	316.7
1987: 1/ 1st Q	7,061.1	2,362.6	718.4	340.8	66.5	153.0
2nd Q	7,098.4	2,340.5	735.6	379.5	73.7	151.4
3rd Q	7,316.2	2,545.8	770.9	340.0	61.5	147.2
4th Q	7,167.8	2,412.8	723.7	325.3	62.3	136.7
1988: 1st Q	8,349.5	2,802.6	842.5	421.5	85.2	156.0
2nd Q	7,771.2	2,594.7	838.7	332.2	76.3	160.7
	Percent change from same period in previous year					
1981	10.2	10.1	2.4	5.4	22.6	-0.7
1982	3.4	5.3	10.3	15.3	2.0	-11.6
1983	-0.9	5.9	7.7	-2.0	25.3	-7.7
1984	11.5	9.7	12.6	17.5	16.2	5.5
1985	3.1	5.2	5.6	14.4	-2.4	1.5
1986	6.9	7.0	10.1	6.4	2.9	5.0
1987	11.0	8.7	9.7	16.9	2.1	4.0
1988 (Jan-June)	13.9	14.8	15.6	4.6	15.2	4.0
1987: 1/ 1st Q	14.9	9.9	17.9	29.2	3.4	17.3
2nd Q	10.0	4.9	12.1	12.2	18.9	-0.6
3rd Q	9.8	11.6	8.0	11.3	-7.5	4.9
4th Q	10.5	8.6	1.6	16.9	-5.6	-4.0
1988: 1st Q	18.2	18.6	17.2	23.7	28.1	2.0
2nd Q	9.5	10.9	14.0	-12.5	3.5	6.1

Note: This series derived by lagging reported excise tax base data one month to adjust for reporting delay.

1/ Because of changes instituted by the Department of Taxation in compiling 1988 general excise taxes by industry, data for 1987 are being revised and quarterly data do not sum to previous annual totals. All percentages are based on comparable data.

Source: Hawaii State Department of Taxation.

Table 5-2
COLLECTIONS OF KEY STATE TAXES AND GENERAL FUND TAX REVENUES: 1982 TO 1988

[Thousands of dollars]

Year	General excise and use tax	Net individual income tax 1/	Net corporate income tax 2/	Tax revenues distributed to State General Fund 3/
1982	574,590	296,757	34,785	1,011,465
1983	615,536	358,072	27,960	1,109,876
1984	669,805	413,885	39,681	1,240,352
1985	707,381	446,358	44,075	1,325,791
1986	777,961	490,185	46,216	1,486,484
1987	869,039	574,729	67,272	1,731,226
1988 (Jan-June)	482,459	329,298	38,983	980,652
1987: 1st Q	216,699	134,394	13,647	400,595
2nd Q	214,933	143,625	26,592	461,714
3rd Q	219,312	138,773	17,857	430,015
4th Q	218,095	157,937	9,176	438,903
1988: 1st Q	240,506	159,295	18,135	466,092
2nd Q	241,953	170,003	20,848	514,560
	Percent change from same period in previous year			
1982	-0.1	-15.1	-20.2	-5.5
1983	7.1	20.7	-19.6	9.7
1984	8.8	15.6	41.9	11.8
1985	5.6	7.8	11.1	6.9
1986	10.0	9.8	4.9	12.1
1987	11.7	17.2	45.6	16.5
1988 (Jan-June)	11.8	18.4	-3.1	13.7
1987: 1st Q	12.9	6.9	75.3	15.4
2nd Q	7.4	43.8	55.0	17.4
3rd Q	10.6	7.5	19.8	13.9
4th Q	16.2	16.5	43.9	19.1
1988: 1st Q	11.0	18.5	32.9	16.3
2nd Q	12.6	18.4	-21.6	11.4

Note: This series represents data as reported by the Department of Taxation, without adjustment.

1/ Declaration of estimated taxes, plus payments with returns, plus withholding tax on wages, less refunds.

2/ Declaration of estimated taxes, plus payments with returns, less refunds.

3/ Excludes non-tax sources.

Source: Hawaii State Department of Taxation.

Table 5-3
DEFENSE EXPENDITURES BY SERVICE: 1980 TO 1988

[Millions of dollars]

Year or quarter	Total	Navy and Marine 1/	Army	Air Force	Coast Guard 2/
1980	1,317.4	711.3	441.8	141.7	22.7
1981	1,449.3	770.4	493.8	158.3	26.7
1982	1,693.4	878.2	611.5	173.7	29.9
1983	1,848.2	935.9	702.7	182.6	27.0
1984	1,867.2	948.2	685.2	207.6	26.2
1985	1,965.4	955.3	780.4	201.0	28.7
1986	1,784.9	892.0	658.6	202.4	31.9
1987	1,855.7	871.5	744.3	212.4	27.4
1987: 1st Q ...	444.2	214.5	172.1	49.8	7.8
2nd Q ..	453.6	230.6	159.6	55.6	7.8
3rd Q ...	495.3	226.5	211.3	51.2	6.2
4th Q ...	462.5	199.8	201.3	55.7	5.6
1988: 1st Q....	466.8	194.3	209.0	58.0	5.5
2nd Q ..	(NA)	(NA)	209.4	56.7	(NA)
	Percent change from same period in previous year				
1980	7.8	11.0	2.8	9.6	2.7
1981	10.0	8.3	11.8	11.7	17.6
1982	16.8	14.0	23.8	9.7	12.0
1983	9.1	6.6	14.9	5.1	-9.7
1984	1.0	1.3	-2.5	13.7	-2.7
1985	5.3	0.7	13.9	-3.1	9.6
1986	-9.2	-6.6	-15.6	0.7	11.1
1987	4.0	-2.3	13.0	4.9	-14.1
1987: 1st Q ...	-2.0	-3.0	-2.3	1.8	9.9
2nd Q ..	1.2	0.7	0.1	6.9	-3.7
3rd Q ...	12.1	5.4	26.0	0.6	-25.3
4th Q ...	4.8	5.5	29.5	10.1	-32.5
1988: 1st Q....	5.1	-9.4	21.4	16.5	-29.5
2nd Q ..	(NA)	(NA)	31.2	2.0	(NA)

Note: Data include all appropriated expenditures for military and civilian payrolls, services, supplies, and construction. Excludes dependent allotments, retired military pay, and non-appropriated funds for exchanges, clubs, special services, etc.

NA Not available.

NC Not comparable.

1/ Since December 1985, Navy data partly estimated due to change in reporting method.

2/ Since the third quarter of 1987, accounting of local purchases partially handled by the California office and data may be underestimating expenditures.

Source: Quarterly reports from armed forces, compiled by DBED.

Table 5-4
HONOLULU DEPARTMENT STORE SALES: 1986 TO 1988

[In thousands of dollars and percent]

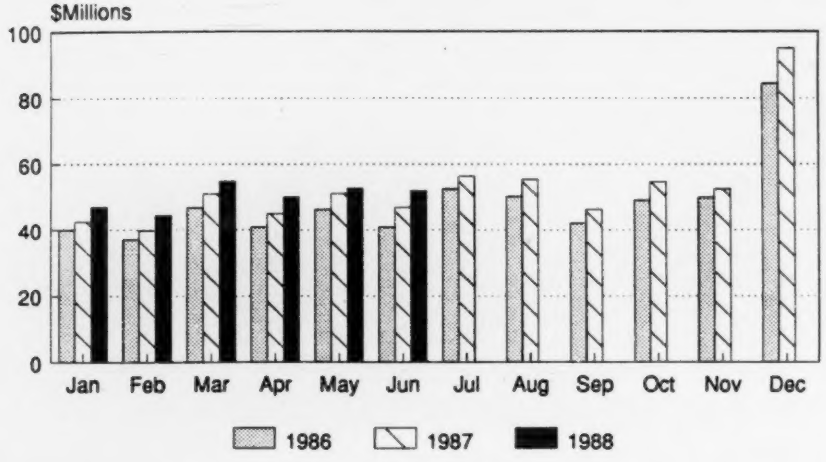
Year	Sales			Percent change from previous year	
	1986	1987	1988	1987	1988
Total	580,464	636,220	300,793	9.6	9.0
January	40,043	42,389	46,883	5.9	10.6
February	37,054	39,672	44,303	7.1	11.7
March	46,787	50,980	54,835	9.0	7.6
April	40,931	44,912	50,012	9.7	11.4
May	46,333	51,159	52,788	10.4	3.2
June	40,909	46,864	51,972	14.6	10.9
July	52,533	56,401		7.4	
August	50,162	55,430		10.5	
September	42,099	46,300		10.0	
October	49,195	54,703		11.1	
November	49,856	52,464		5.2	
December	84,562	94,946		12.3	

Source: Bureau of the Census, *Current Business Reports*, "Monthly Retail Trade: Sales and Inventories," monthly.

Figure 5-2

Honolulu Department Store Sales

($Millions)



Source: Table 5-4, based on 22 department stores.

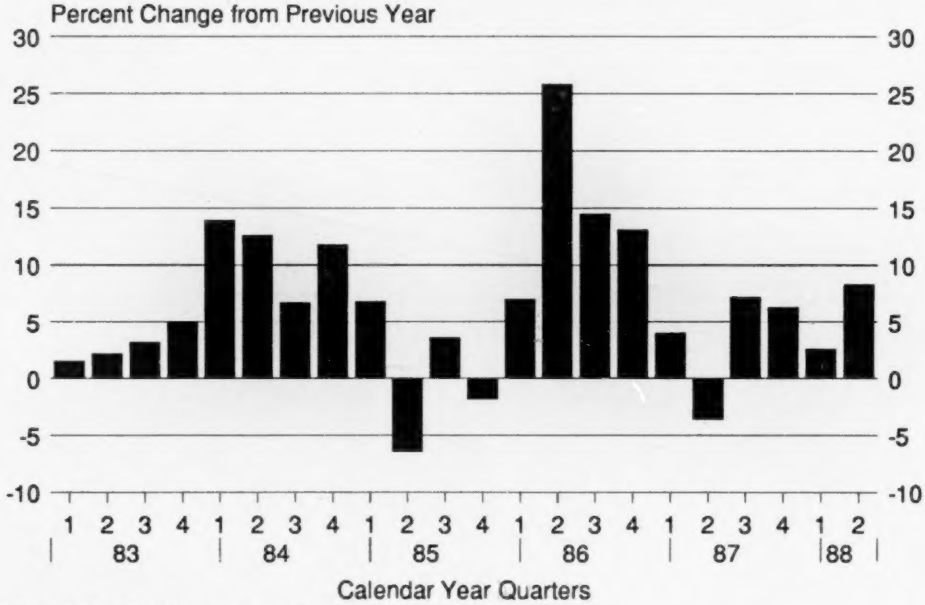
6. The Visitor Industry

Preliminary data from the Hawaii Visitors Bureau show that the number of visitors to Hawaii increased 8.3 percent during the second quarter of 1988 from the same period in 1987. This is up from a first quarter increase of 2.6 percent. The major contributor to total growth in visitor numbers was the growth in eastbound visitors, mostly Japanese, which jumped 23.2 percent during the second quarter. The number of westbound visitors rebounded from a 3.2 percent decline in the first quarter to a 2.7 percent increase in the second quarter. However, this still left the six-month total for westbound visitors about .5 percent below the first half of 1987.

Despite of the growth in number of visitors, the overall hotel occupancy rate decreased to 78.8 percent in the first five months of 1988 compared with an 82.8 percent rate during the same period last year. All islands experienced declines in the occupancy rate probably due to the addition of 4,000 hotel and condo units to the room inventory.

Figure 6-1

GROWTH IN VISITOR ARRIVALS



SOURCE: DBED, Based on data from the Hawaii Visitors Bureau

Table 6-1
VISITOR ARRIVALS AND AVERAGE DAILY VISITOR CENSUS: 1980 TO 1988

Year 1/	Visitors staying overnight or longer			Average daily visitor census	
	Total	Westbound 2/	Eastbound 3/	Westbound 2/	All
1980	3,934,504	3,046,132	888,372	86,788	96,497
1981	3,934,623	2,974,791	959,832	85,449	95,968
1982	4,242,925	3,278,525	964,400	94,740	105,310
1983	4,368,105	3,396,115	971,990	97,390	108,040
1984	4,855,580	3,721,380	1,134,200	106,260	118,660
1985	4,884,110	3,708,610	1,175,500	103,820	116,700
1986	5,606,980	4,256,390	1,350,590	118,110	132,800
1987	5,799,830	4,204,010	1,595,820	116,780	134,100
1988 (Jan-June) (p)	2,970,060	2,076,280	893,780	115,160	134,800
1987: 1st Q	1,448,860	1,084,080	364,780	127,850	144,060
2nd Q	1,370,020	999,940	370,080	107,450	123,720
3rd Q	1,555,160	1,102,400	452,760	118,320	138,000
4th Q	1,425,790	1,017,590	408,200	113,670	131,420
1988: 1st Q (p)	1,486,960	1,049,250	437,710	121,050	140,500
2nd Q (p)	1,483,100	1,027,030	456,070	109,000	129,040
	Percent change from corresponding period in previous year				
1980	-0.7	-3.0	8.2	-3.2	-2.2
1981	0.0	-2.3	8.0	-1.5	-0.5
1982	7.8	10.2	0.5	10.9	9.7
1983	3.0	3.6	0.8	2.8	2.6
1984	11.2	9.6	16.7	9.1	9.8
1985	0.6	-0.3	3.6	-2.3	-1.7
1986	14.8	14.8	14.9	13.9	13.8
1987	3.4	-1.2	18.2	-1.1	1.0
1988 (Jan-June) (p)	5.4	-0.4	21.6	-2.1	0.8
1987: 1st Q	4.0	-0.3	19.4	0.6	2.4
2nd Q	-3.6	-8.6	13.2	-9.5	-7.0
3rd Q	7.2	2.7	19.9	3.7	5.7
4th Q	6.3	1.6	19.9	0.5	2.8
1988: 1st Q (p)	2.6	-3.2	20.0	-5.3	-2.5
2nd Q (p)	8.3	2.7	23.2	1.4	4.3

p Preliminary.

1/ Beginning in 1984, sample size reduced from 20 to 10 percent and numbers rounded to the nearest 10.

2/ Arriving from the Mainland United States or Canada.

3/ Arriving from the Orient and Pacific areas.

Source: Hawaii Visitors Bureau.

Table 6-2
WESTBOUND VISITORS, BY COUNTY: 1981 TO 1988

Year 1/	City and County of Honolulu	Hawaii County	Maui County	Kauai County
1981	2,398,477	672,683	1,389,892	757,811
1982	2,589,190	678,170	1,550,080	733,295
1983	2,591,575	712,380	1,644,605	691,940
1984	2,901,320	760,940	1,854,690	814,590
1985	2,828,640	697,380	1,831,110	832,580
1986	3,146,030	786,930	2,003,870	1,014,650
1987	3,078,500	782,550	1,908,780	1,032,840
1988 (Jan-June)	1,443,540	377,280	946,990	512,880
1987: 1st Q	776,110	227,890	498,660	262,940
2nd Q	739,190	181,350	450,740	247,150
3rd Q	825,750	188,160	499,840	278,530
4th Q	737,450	185,150	459,540	244,220
1988: 1st Q (p)	716,440	201,190	483,710	259,590
2nd Q (p)	727,100	176,090	463,280	253,290
	Percent change from corresponding period in previous year			
1982	8.0	0.8	11.5	-3.2
1983	0.1	5.0	6.1	-5.6
1984	12.0	6.8	12.8	17.7
1985	-2.5	-8.4	-1.3	2.2
1986	11.2	12.8	9.4	21.9
1987	-2.1	-0.6	-4.7	1.8
1988 (Jan-June)	-4.7	-7.8	-0.3	0.5
1987: 1st Q	-1.4	6.4	-3.0	6.4
2nd Q	-9.1	-4.9	-13.2	-5.7
3rd Q	1.2	2.2	-0.4	6.9
4th Q	1.2	-6.5	-2.0	-0.2
1988: 1st Q (p)	-7.7	-11.7	-3.0	-1.3
2nd Q (p)	-1.6	-2.9	2.7	2.5

p Preliminary.

1/ Data prior to 1981 are not comparable to later figures due to revisions. Beginning in 1984, sample size changed from 20 to 10 percent

Source: Hawaii Visitors Bureau.

Table 6-3
RESIDENCE OF OVERNIGHT AND LONGER VISITORS TO HAWAII: 1986 AND 1987

[In thousands and percent]

Place of residence	1986		1987		Percent change 1986 to 1987
	Number	% dist.	Number	% dist.	
Total	5,607	100.0	5,800	100.0	3.4
United States	3,739	66.7	3,669	63.3	-1.9
Foreign	1,868	33.3	2,131	36.7	14.1
Asia	1,083	19.3	1,313	22.6	21.2
Japan	944	16.8	1,161	20.0	23.0
Other Asia	139	2.5	152	2.6	9.4
Canada	282	5.0	242	4.2	-14.2
Europe	99	1.8	171	3.0	72.7
United Kingdom	49	0.9	66	1.1	34.7
West Germany	30	0.5	63	1.1	110.0
Other Europe	20	0.4	42	0.8	110.0
Oceania and South Pacific	360	6.4	373	6.4	3.6
Australia	219	3.9	218	3.8	-0.5
New Zealand	98	1.7	117	2.0	19.4
Other South Pacific	43	0.8	28	0.6	-34.9
Other foreign	44	0.8	232	4.0	427.3

Source: Hawaii Visitors Bureau, tabular release dated March 1988.

Table 6-4
HOTEL OCCUPANCY RATES BY AREA: 1986 TO 1988

[Percent; survey excludes some large hotel chains]

Date	State	Oahu	Hawaii Island	Maui Island	Kauai Island	Molokai
1986	81.2	85.2	62.2	82.7	76.7	50.3
1987	81.1	86.8	60.8	76.2	74.2	45.4
1987 (Jan-June)	82.8	87.9	64.2	79.1	76.0	52.3
1988 (Jan-June)	78.8	85.3	56.5	75.2	67.9	45.9
1987:						
January	82.6	89.4	68.4	74.7	67.1	72.0
February	92.6	95.8	84.1	89.6	85.6	74.0
March	88.1	92.9	66.0	85.3	84.2	58.2
April	75.9	79.6	57.1	76.8	70.3	40.1
May	77.1	80.2	60.3	76.8	77.2	37.7
June	78.3	86.9	47.4	69.6	70.5	31.7
July	83.2	90.6	57.4	72.6	78.4	35.0
August	87.5	93.3	65.8	81.8	82.9	39.8
September	75.7	82.7	52.3	66.7	70.3	34.8
October	81.1	85.6	61.4	78.1	79.1	39.7
November	81.3	86.8	60.6	78.0	71.9	42.7
December	71.0	78.3	52.6	62.1	54.0	44.9
1988:						
January	76.2	84.8	58.1	67.2	55.6	50.1
February	86.7	91.9	70.8	81.9	78.4	58.7
March	82.3	87.6	59.3	82.0	72.9	51.3
April	74.1	78.2	54.5	76.7	65.6	38.6
May	73.4	79.5	46.2	70.6	69.8	40.5
June	77.7	86.9	48.2	70.5	62.8	34.4

Source: Pannell Kerr Forster & Company, *Trends in the Hotel Industry, Hawaii.*

Table 6-5
VISITOR ACCOMMODATIONS IN HAWAII, BY TYPE: 1977 TO 1988

[As of February]

Year and island	Properties			Units		
	Total	Hotels 1/	Condo-miniums 2/	Total	Hotels 1/	Condo-miniums 2/
1977	335	(NA)	(NA)	44,986	39,901	5,085
1978	353	(NA)	(NA)	47,070	40,001	7,069
1979	381	(NA)	(NA)	49,832	41,299	8,533
1980	387	(NA)	(NA)	54,246	42,609	11,637
1981	412	214	198	56,769	42,575	14,194
1982	417	208	209	57,968	43,568	14,400
1983	426	218	208	58,765	45,352	13,413
1984	443	209	234	62,448	44,846	17,602
1985	481	207	274	65,919	44,115	21,804
1986	523	201	322	66,308	43,309	22,999
1987	510	196	314	65,318	43,422	21,896
1988	481	203	278	69,012	47,892	21,120
ISLANDS: 1988						
Oahu	183	110	73	37,841	30,206	7,635
Waikiki 3/	150	89	61	33,661	26,911	6,750
Rest of Oahu	33	21	12	4,180	3,295	885
Other islands	298	93	205	31,171	17,686	13,485
Hawaii	75	29	46	8,823	6,469	2,354
Kauai	78	32	46	7,180	4,325	2,855
Maui	137	29	108	14,591	6,556	8,035
Molokai	7	2	5	567	326	241
Lanai	1	1	-	10	10	-

NA Not available.

1/ Hotels, apartment hotels, motels, and cottages.

2/ Condominium accommodations in rental pools for transient use.

3/ Includes Diamond Head and Kahala but not areas ewa and mauka (west and north) of the Ala Wai Canal.

Source: Hawaii Visitors Bureau, *Visitor Plant Inventory*, 1976 to 1988.

Table 6-6
AVERAGE DAILY HOTEL ROOM RATES, BY ISLANDS: 1970 TO 1988

[Dollars]

Year	State	Oahu	Hawaii	Maui	Kauai	Molokai
1970	25.74	(NA)	(NA)	(NA)	(NA)	(NA)
1975	29.75	(NA)	(NA)	(NA)	(NA)	(NA)
1976	29.54	26.70	30.52	37.61	34.51	(NA)
1977	34.28	31.87	33.08	42.59	38.45	(NA)
1978	38.56	35.90	36.70	47.86	42.25	(NA)
1979	44.40	41.42	41.44	57.15	47.75	(NA)
1980	47.37	42.70	46.40	61.34	55.16	(NA)
1981	49.87	43.16	47.16	73.44	56.06	(NA)
1982	51.78	44.80	47.37	75.02	58.48	(NA)
1983	55.58	47.62	50.49	81.60	59.75	(NA)
1984	59.25	49.45	57.17	88.89	65.05	(NA)
1985	65.66	57.00	65.35	96.75	69.51	(NA)
1986	72.67	61.99	73.88	115.33	71.56	56.73
1987	80.09	69.04	82.21	127.05	81.65	64.26
1988 (Jan-June)	91.56	78.41	92.91	139.54	100.33	91.56
	Percent change from previous year					
1976	-0.7	(NA)	(NA)	(NA)	(NA)	(NA)
1977	16.1	19.4	8.4	13.2	11.4	(NA)
1978	12.5	12.7	10.9	12.4	9.9	(NA)
1979	15.2	15.4	12.9	19.4	13.0	(NA)
1980	6.7	3.1	12.0	7.3	15.5	(NA)
1981	5.2	1.1	1.6	19.7	1.6	(NA)
1982	3.8	3.8	0.4	2.2	4.3	(NA)
1983	7.4	6.3	6.6	8.8	2.2	(NA)
1984	6.6	3.8	13.2	8.9	8.9	(NA)
1985	10.8	15.3	14.3	8.8	6.9	(NA)
1986	11.5	9.0	15.1	17.5	8.4	(NA)
1987	10.2	11.4	11.3	10.2	14.1	13.3
1988 (Jan-June)	10.2	9.9	7.4	5.5	20.1	10.1

NA Not available.
Source: Pannell Kerr Forster & Company, *Trends in the Hotel Industry, Hawaii.*

7. Construction

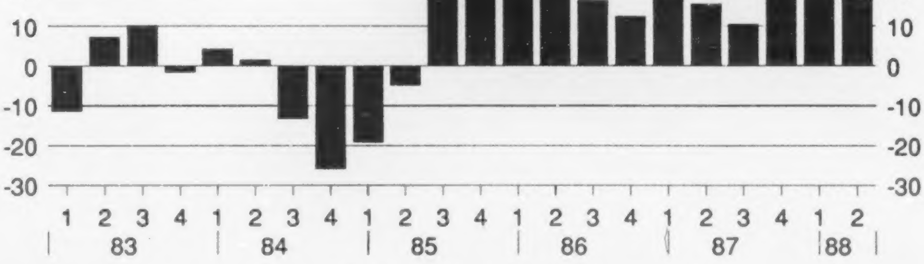
The construction industry entered its fourth year of expansion in 1988. The value of construction completed during the first half of 1988 increased by 22.1 percent from the same period in 1987. The value of private building authorizations, an indicator of future construction activity, increased 15.6 percent in the first half of the year. Residential permits which increased 34.2 percent during the first five months continued to lead private construction authorizations.

Government contracts for construction, which declined during the last three quarters of 1987, grew 22.5 percent during the first half of 1988. This growth was mainly due to increases in Federal and State government contracts.

By county, private construction increased in all counties except Honolulu, which experienced a decline of 1.9 percent. The growth in Neighbor Island private authorizations has been the major contributor to continued growth in the construction industry.

Figure 7-1

GROWTH IN CONSTRUCTION EXPENDITURES



SOURCE: DBED, Based on data from the Dept. of Taxation

Table 7-1
ESTIMATED VALUE OF COMPLETED CONSTRUCTION, NEW PRIVATE BUILDING AUTHORIZATIONS, AND GOVERNMENT CONTRACTS AWARDED, HAWAII: 1985 TO 1988

[Millions of dollars]

		Private building authorizations				
Year	Value of construction completed 1/	Total private authorization	Residential	Commercial and industrial 2/	Additions and alterations	Government contracts awarded
1985	1,429.6	889.0	500.1	208.8	180.1	248.5
1986	1,810.0	1,024.1	455.5	266.3	302.3	425.1
1987	2,145.5	1,161.9	507.0	344.4	310.5	372.2
1988 (Jan-June) 3/	1,179.3	609.5	303.6	176.7	129.1	229.9
1987: 1st Q	465.1	248.8	122.7	72.7	53.4	97.2
2nd Q	500.9	325.2	134.7	80.9	109.6	90.4
3rd Q	552.4	268.6	119.0	67.7	81.9	125.1
4th Q	553.7	319.3	130.6	123.1	65.6	59.5
1988: 1st Q	590.6	317.4	135.1	112.2	70.1	121.8
2nd Q 3/	588.7	292.1	168.5	64.5	59.0	108.1
	Percent change from corresponding period in previous year					
1985	16.5	52.9	52.6	100.8	20.2	-39.6
1986	26.6	15.7	-10.6	32.7	68.7	71.1
1987	18.5	13.5	11.3	29.3	2.7	-12.4
1988 (Jan-June) 3/	22.1	15.6	34.2	20.7	-16.4	22.5
1987: 1st Q	21.8	1.6	-1.5	4.6	4.7	21.8
2nd Q	15.6	47.5	42.8	24.3	79.4	-20.8
3rd Q	10.5	-24.3	-12.1	-21.3	-38.7	-20.6
4th Q	27.9	56.9	29.2	169.4	15.7	-16.9
1988: 1st Q	27.0	27.6	10.1	54.3	31.3	25.3
2nd Q 3/	17.5	4.9	62.6	-12.5	-41.6	19.6

NA Not available.

1/ Value of construction subject to State excise tax, adjusted to reflect reporting delay of about one month.

2/ Includes hotels.

3/ Excludes Maui County building private authorizations for the second quarter. Percent computations based on comparable periods and coverage.

Source: Hawaii State Department of Taxation; County building departments; Trade Publishing Co., *Building Industry Digest: BID Service Weekly.*

Table 7-2
ESTIMATED VALUE OF PRIVATE BUILDING CONSTRUCTION AUTHORIZATIONS, BY COUNTY: 1980 TO 1988

[Millions of dollars]

Year	State	City & County of Honolulu	Hawaii County	Kauai County	Maui County
1980	1,219.2	686.3	146.0	133.3	253.7
1981	802.0	454.1	136.5	67.7	143.7
1982	683.1	473.0	75.2	44.2	90.7
1983	685.2	366.8	86.7	140.5	91.3
1984	581.5	378.3	90.3	53.0	59.8
1985	889.0	524.8	121.3	63.9	178.9
1986	1,024.1	545.3	231.5	93.2	154.1
1987	1,161.9	749.5	145.2	103.5	163.8
1988 (Jan-June) 1/	609.4	370.7	77.2	66.2	95.2
1987 1st Q	248.8	156.9	27.7	29.6	34.7
2nd Q	325.2	221.0	34.7	22.7	46.8
3rd Q	268.6	153.3	38.3	32.0	45.1
4th Q	319.3	218.3	44.6	19.2	37.2
1988 1st Q	317.4	154.1	36.8	31.2	95.2
2nd Q 1/	292.0	216.6	40.4	35.0	(NA)
	Percent change from corresponding period in previous year				
1980	39.4	36.9	30.1	17.1	72.0
1981	-34.2	-33.8	-6.5	-49.2	-43.4
1982	-14.8	4.2	-44.9	-34.7	-35.0
1983	0.3	-22.4	15.3	217.5	0.6
1984	-15.1	3.1	4.3	-62.3	-34.4
1985	52.9	38.7	34.3	20.5	199.0
1986	15.2	3.9	90.8	45.9	-13.9
1987	13.5	37.5	-37.3	11.0	6.3
1988 (Jan-June) 1/	15.6	-1.9	23.7	26.6	(NA)
1987 1st Q	1.6	4.0	25.4	-29.7	15.8
2nd Q	47.2	95.7	-40.7	41.9	40.8
3rd Q	-24.3	-7.3	-67.9	66.8	-13.3
4th Q	56.9	86.7	40.3	20.8	-4.4
1988 1st Q	27.6	-1.8	32.9	5.4	174.4
2nd Q 1/	4.9	-2.0	16.4	54.2	(NA)

NA Not available.

1/ Excludes Maui County building authorizations for the second quarter. Percent computations based on comparable periods and coverage.

Source: County building departments.

Table 7-3
ESTIMATED VALUE OF GOVERNMENT CONSTRUCTION CONTRACTS AWARDED IN HAWAII, BY AWARDING AGENCY: 1980 TO 1988

[Millions of dollars]

Year	Total	Federal	State	County
1980	230.6	66.5	120.0	44.1
1981	427.5	176.1	180.5	70.9
1982	392.7	139.6	182.0	71.2
1983	277.9	84.7	126.8	66.4
1984	411.8	130.0	196.7	85.1
1985	248.5	74.8	93.8	79.9
1986	425.1	101.9	205.4	117.8
1987	372.2	107.9	174.2	90.1
1988 (Jan-June)	229.9	48.7	140.4	40.8
1987: 1st Q	97.2	18.3	51.9	27.0
2nd Q	90.4	12.4	39.4	38.6
3rd Q	125.1	56.7	52.8	15.6
4th Q	59.5	20.4	30.1	8.9
1988: 1st Q	121.8	36.1	51.7	34.0
2nd Q	108.1	12.6	88.7	6.8
	Percent change from corresponding period in prevous year			
1980	-40.7	-37.1	-45.7	-28.8
1981	85.4	164.8	50.5	60.6
1982	-8.1	-20.7	0.8	0.4
1983	-29.3	-39.3	-30.3	-6.7
1984	48.2	53.4	55.1	28.2
1985	-39.6	-42.4	-52.3	-6.2
1986	71.1	36.2	119.1	47.4
1987	-12.4	5.9	-15.2	-49.3
1988 (Jan-June)	22.5	58.6	53.8	-37.8
1987: 1st Q	21.8	31.7	9.0	47.5
2nd Q	-20.8	80.2	-19.2	-34.0
3rd Q	-20.6	53.9	-41.9	-48.0
4th Q	-16.9	-43.6	-74.7	-81.2
1988: 1st Q	25.3	97.3	-0.4	25.9
2nd Q	19.6	1.6	125.1	-82.4

Source: Trade Publishing Co., *Building Industry Digest: BID Service Weekly*, and First Hawaiian Bank, Research Division.

Table 7-4
NUMBER OF SINGLE-FAMILY AND MULTI-FAMILY HOUSING UNITS AUTHORIZED BY COUNTY: 1980 TO 1988

Year	State	City & County of Honolulu	Hawaii County	Kauai County	Maui County
Single-family and duplex units:					
1980	4,058	1,645	1,204	401	808
1981	2,649	728	1,048	409	464
1982	2,285	725	800	230	530
1983	3,417	1,627	938	291	561
1984	4,442	2,513	928	361	640
1985	4,951	2,436	1,046	453	1,016
1986	4,700	2,173	1,144	438	945
1987	6,066	2,870	1,442	599	1,155
1988 (Jan-June) 1/	2,636	1,081	755	390	(NA)
1987 1st Q	1,523	749	325	137	312
2nd Q	1,639	843	337	148	311
3rd Q	1,429	590	399	161	279
4th Q	1,475	688	381	153	253
1988 1st Q	1,323	359	352	202	410
2nd Q 1/	1,313	722	403	188	(NA)
Multi-family units:					
1980	6,603	3,297	727	766	1,813
1981	3,142	1,873	270	64	935
1982	4,594	4,109	245	118	122
1983	1,341	1,220	38	73	10
1984	1,021	829	153	35	4
1985	2,450	1,807	128	84	431
1986	2,479	1,986	21	0	472
1987	1,459	785	138	0	536
1988 (Jan-June) 1/	877	611	222	0	(NA)
1987 1st Q	488	488	0	0	0
2nd Q	567	80	77	0	410
3rd Q	99	99	0	0	0
4th Q	305	118	61	0	126
1988 1st Q	428	162	222	0	44
2nd Q 1/	449	449	0	0	(NA)

NA Not available.

1/ Excludes Maui County building authorizations for the second quarter.

Source: County building departments.

Table 7-5
HONOLULU CONSTRUCTION COST INDEXES: 1983 TO 1988

[1982=100]

Year	Single-family residence			High-rise building		
	All components	Material prices	Labor 1/	All components	Material prices	Labor 1/
1983..............	109.5	111.3	107.3	106.9	107.4	106.9
1984..............	114.3	113.1	115.8	110.9	108.0	114.5
1985..............	117.4	115.2	120.1	113.5	108.7	118.4
1986..............	121.5	119.1	124.4	116.8	110.8	122.6
1987..............	125.7	123.7	128.2	120.7	114.9	125.8
1986: 1 Q.....	120.3	118.1	123.2	117.1	112.4	121.1
2 Q.....	119.6	116.8	123.2	115.3	108.6	121.1
3 Q.....	121.2	118.7	124.3	116.3	111.2	122.3
4 Q.....	124.8	123.0	126.9	118.5	110.8	125.2
1987: 1 Q.....	123.9	120.7	127.9	119.8	112.9	125.7
2 Q.....	124.6	121.6	128.3	120.8	115.0	125.8
3 Q.....	126.3	124.8	128.3	121.2	115.8	125.8
4 Q.....	128.0	127.7	128.3	121.2	115.8	125.8
1988: 1 Q.....	132.8	134.2	131.0	126.3	124.3	127.9
2 Q.....	130.8	129.9	132.0	124.3	117.8	129.8
	Percent change from corresponding period in previous year					
1983..............	9.5	11.3	7.3	6.9	7.4	6.9
1984..............	4.3	1.6	7.9	3.8	0.6	7.1
1985..............	2.7	1.9	3.7	2.4	0.6	3.4
1986..............	3.5	3.4	3.6	2.9	1.9	3.5
1987..............	3.5	3.8	3.0	3.4	3.7	2.7
1987: 1 Q.....	3.0	2.2	3.8	2.3	0.4	3.8
2 Q.....	4.2	4.1	4.1	4.8	5.9	3.9
3 Q.....	4.2	5.1	3.2	4.2	4.1	2.9
4 Q.....	2.6	3.8	1.1	2.3	4.5	0.5
1988: 1 Q.....	7.2	11.2	2.4	5.4	10.1	1.8
2 Q.....	5.0	6.8	2.9	2.9	2.4	3.2

1/ Includes wages and benefits.
Source: First Hawaiian Bank, Research Division.

8. Population Estimates by Counties and Islands, 1980-1987

The population of the Neighbor Islands is continuing to increase more rapidly than that of Oahu, according to newly released estimates by the Federal-State Cooperative Program for Population Estimates. Between the 1980 census and mid-1987, growth amounted to only 8.9 percent in the City and County of Honolulu and 24.6 percent in the rest of the State.

For the State as a whole, resident population rose by 12.2 percent during the 7 1/4 years following the 1980 census, reaching a 1987 total of 1,082,500. This figure includes all persons whose usual place of residence is Hawaii, whether members of the armed forces stationed in the Islands (58,100), military dependents (64,850), or other civilians (959,500).

The de facto population meanwhile increased 14.1 percent to a 1987 Statewide total of 1,201,000. This figure includes an average of 134,300 visitors present during the year but excludes 15,700 residents temporarily out of the State.

For the United States as a whole, the 1980-1987 growth was 7.4 percent, well under the Hawaii rate.

By islands, Oahu continued to lead, with 830,600 residents, accounting for 76.7 percent of the State total. (In 1980, Oahu reported 79.0 percent of the resident population.) The Big Island, Hawaii County, was second, with 114,400 residents, followed by Maui (81,100), Kauai (47,400), Molokai (6,700), Lanai (2,200), and Niihau (202). Growth since 1980 was fastest on Maui, at 29.0 percent, followed by the Big Island (24.3 percent), Kauai (21.9), Molokai (10.3), and Oahu (8.9).

De facto population growth was particularly rapid on the Neighbor Islands which, as a group, passed the 300,000 mark late in 1986. The de facto population increased by 46.8 percent on Maui, 35.7 percent on Kauai, 24.7 percent on the Big Island, and 8.6 percent on Oahu.

Densities varied greatly from island to island. De facto population per square mile was highest on Oahu, at 1,498, and lowest on Niihau and Kahoolawe, respectively, 2.9 and zero.

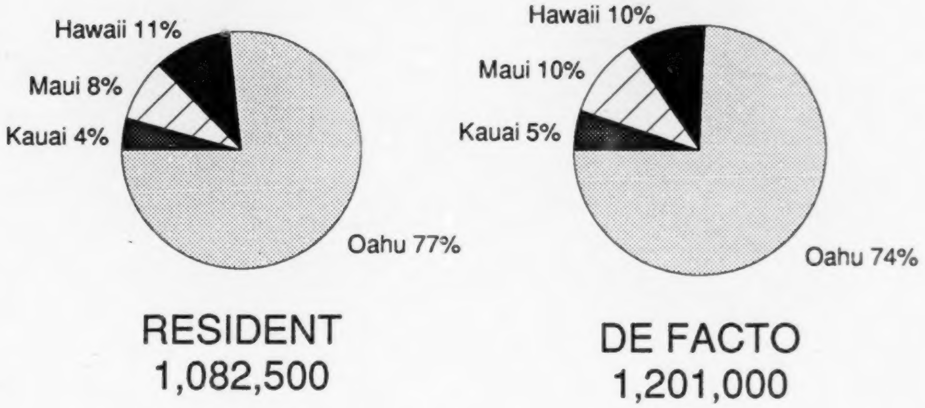
These shifts in the geographic distribution of population were accompanied by even more dramatic changes in the age structure. The population under 18 increased only 3.6 percent between 1980 and 1987, compared with 12.1 percent for persons 18 to 64 and 43.4 percent for those 65 and over. The median age meanwhile rose from 28.3 years to 31.5 years. Persons 65 and older accounted for 7.9 percent of the all-age total in 1980 but 10.1 percent in 1987. During the same period, the sex ratio dropped from 105.3 males per 100 females to 104.0.

Greater detail appears in the accompanying tables. Further information, together with a description of estimating methods, will be published in a forthcoming DBED report.

These estimates were prepared for the Federal-State Cooperative Program for Local Population Estimates, an ongoing program involving the U.S. Bureau of the Census, the Hawaii State Department of Health, and DBED. Data on visitors present and residents out of State, needed to calculate de facto population, were provided by the Hawaii Visitors Bureau.

Figure 8-1

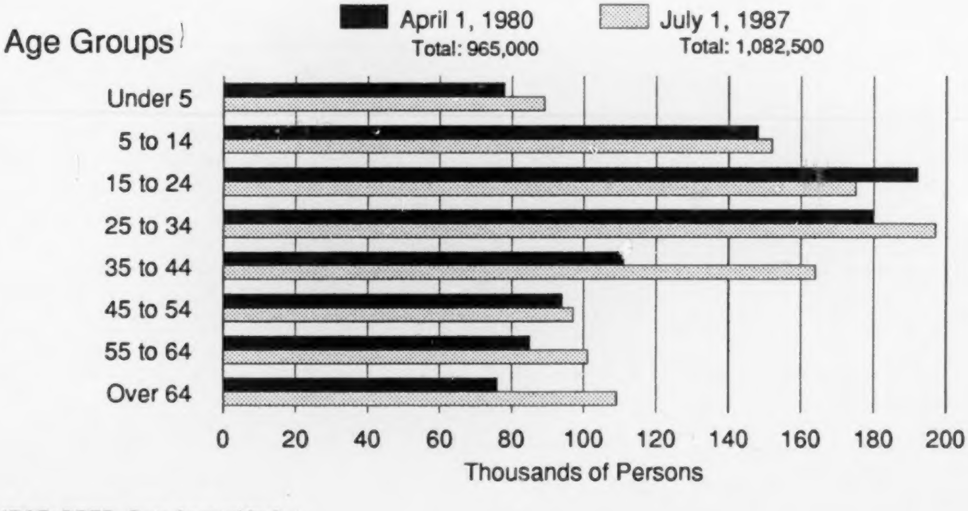
DISTRIBUTION OF RESIDENT AND DE FACTO POPULATIONS: 1987



SOURCE: DBED. Data from Tables 8-1 and 8-2.

Figure 8-2

RESIDENT POPULATION BY AGE GROUPS: 1980 AND 1987



SOURCE: DBED. Data from table 8-4.

Table 8-1
RESIDENT POPULATION, BY COUNTIES: 1980 TO 1987

[Based on place of usual residence. Includes armed forces stationed or homeported in Hawaii and residents temporarily absent; excludes visitors present]

Date	State total	City & County of Honolulu	Hawaii County	Kauai County	Maui County 1/
1980: April 1...........	964,691	762,565	92,053	39,082	70,991
July 1...........	968,900	764,800	93,000	39,400	71,600
1981: July 1...........	980,200	768,400	97,000	40,600	74,100
1982: July 1...........	997,600	778,600	100,200	41,900	76,900
1983: July 1...........	1,018,600	793,200	102,700	43,000	79,800
1984: July 1...........	1,036,000	801,400	107,000	44,100	83,400
1985: July 1...........	1,051,500	811,100	109,500	45,400	85,500
1986: July 1...........	1,064,700	820,300	111,200	46,200	87,100
1987: July 1...........	1,082,500	830,600	114,400	47,600	89,900

1/ Including Kalawao County (Kalaupapa Settlement).

Source: Federal-State Cooperative Program for Local Population Estimates.

Table 8-2
DE FACTO POPULATION, BY COUNTIES: 1980 TO 1987

[Includes all persons physically present in area, regardless of military status or usual place of residence. Includes visitors present but excludes residents temporarily absent, both calculated as averages for 12-month periods centered on estimate date]

Date	State total	City & County of Honolulu	Hawaii County	Kauai County	Maui County 1/
1980: April 1...........	1,052,700	822,000	98,700	46,100	85,900
July 1...........	1,055,800	823,600	99,500	46,400	86,400
1981: July 1...........	1,064,500	825,400	102,600	47,500	89,000
1982: July 1...........	1,088,300	840,100	105,700	48,500	94,000
1983: July 1...........	1,115,200	850,400	110,400	50,700	103,700
1984: July 1...........	1,138,600	856,000	113,200	54,600	114,900
1985: July 1...........	1,149,600	861,600	116,100	56,200	115,700
1986: July 1...........	1,180,500	880,900	119,500	60,300	119,700
1987: July 1...........	1,201,000	893,100	123,100	62,500	122,400

1/ Including Kalawao County (Kalaupapa Settlement).

Source: Federal-State Cooperative Program for Local Population Estimates.

Table 8-3
ESTIMATED POPULATION, RESIDENT AND DE FACTO, AND DE FACTO DENSITY, BY COUNTIES AND ISLANDS: JULY 1, 1987

County and Island	Resident population		De facto population		
	Number, 1987	Percent change, 1980-87	Number, 1987	Percent change, 1980-87	Per square mile, 1987
State total	1,082,500	12.2	1,201,000	14.1	186.9
County:					
Hawaii	114,400	24.3	123,100	24.7	30.5
Maui	89,800	26.7	122,300	42.6	105.3
Kalawao	145	0.7	145	0.7	10.9
Honolulu	830,600	8.9	893,100	8.6	1,497.7
Kauai	47,600	21.7	62,500	35.4	100.8
Island:					
Hawaii	114,400	24.3	123,100	24.7	30.5
Maui	81,100	29.0	112.800	46.8	154.8
Kahoolawe	-	...	-	...	-
Lanai	2,200	2.2	2,200	1.9	15.5
Molokai	6,700	10.3	7,500	8.3	28.7
Oahu 1/	830,600	8.9	893,100	8.6	1,497.7
Kauai	47,400	21.9	62,300	35.7	113.3
Niihau	202	-10.6	202	-10.6	2.9

1/ Includes the Northwestern Hawaiian Islands, except Midway.

Source: Federal-State Cooperative Program for Local Population Estimates.

Table 8-4
RESIDENT POPULATION, BY AGE AND SEX: 1980 AND 1987

[In thousands. Includes armed forces stationed or homeported in Hawaii]

Age group	April 1, 1980 (census)			July 1, 1987 (estimates)		
	Both sexes	Male	Female	Both sexes	Male	Female
Total	965	495	470	1,083	552	531
Under 5 years	78	40	38	89	46	43
5 to 14 years	148	76	72	152	78	74
15 to 24 years	192	105	87	175	94	80
25 to 34 years	180	92	88	197	102	95
35 to 44 years	111	56	55	164	82	82
45 to 54 years	94	45	50	97	47	51
55 to 64 years	85	42	43	101	50	50
65 to 74 years	49	26	23	69	34	35
75 to 84 years	21	10	11	31	16	15
85 years and over	6	2	4	9	3	6
5 to 17 years	198	102	96	197	101	96
18 to 24 years	142	79	63	129	71	58
25 to 44 years	291	148	143	360	184	177
45 to 64 years	180	87	92	198	97	101
16 years and over	723	370	352	828	421	407
18 years and over	689	353	336	797	405	392
21 years and over	631	320	310	745	377	368
65 years and over	76	38	38	109	53	56
Median age	28.3	27.6	29.1	31.5	30.7	32.3

Source: U.S. Bureau of the Census, "State Population and Household Estimates, with Age, Sex, and Components of Change: 1981-87," *Current Population Reports, Population Estimates and Projections* Series P-25, No. 1024 (May 1988), p. 40.

Table 9-1
RECENT ECONOMIC AND DEMOGRAPHIC TRENDS: STATE OF HAWAII

Series 1/	Unit	Period 2/	Number	Percent change from same period in previous year
Resident population	Persons	7/1/87	1,082,500	1.7
City and County of Honolulu	Persons	7/1/87	830,600	1.3
Hawaii County	Persons	7/1/87	114,400	2.9
Kauai Island	Persons	7/1/87	47,400	3.1
Niihau	Persons	7/1/87	202	-5.6
Maui Island	Persons	7/1/87	81,100	3.6
Molokai	Persons	7/1/87	6,700	0.8
Lanai	Persons	7/1/87	2,200	-0.9
Personal income	$ Million	1st Q	17,373	7.3
Consumer price index:				
Honolulu	(1982-84 = 100)	Jan-June	120.1	6.0
U.S.	(1982-84 = 100)	Jan-June	116.8	3.9
Construction:				
Private permits 3/	$ Million	Jan-June	609.5	15.6
Residential permits	$ Million	Jan-June	303.6	34.2
New single-family units	Number	Jan-June	2,636	-7.5
New multi-family units	Number	Jan-June	877	36.0
Commercial & industrial	$ Million	Jan-June	176.7	20.7
Additions & alterations	$ Million	Jan-June	129.1	-16.4
Government contracts awarded	$ Million	Jan-June	229.9	22.5
Construction cost indexes (Honolulu):				
Single-family units	(1982 = 100)	2nd Q	130.8	5.0
High-rise buildings	(1982 = 100)	2nd Q	124.3	2.9
Employment (p):				
Civilian labor force	Persons	Jan-June	525,600	3.4
Civilian employment	Persons	Jan-June	508,650	4.3
Civilian unemployment	Persons	Jan-June	16,900	-18.0
Unemployment rate	Percent	Jan-June	3.2	-
Total jobs	Number	Jan-June	517,500	3.0
Visitor industry:				
Total visitors	Number	Jan-June	2,970,060	5.4
Westbound	Number	Jan-June	2,076,280	-0.4
Eastbound	Number	Jan-June	893,780	21.6
Visitor expenditures (p)	$ Billion	1987	6.6	18.9
Hotel units	Number	February	69,012	5.7
Defense expenditures	$ Million	1987	1,855.7	4.0
Sugar production (p)	$ Million	1987	335.9	-7.2
Pineapple sales (p)	$ Million	1987	251.8	4.0

p Provisional estimates.

1/ Statewide data, unless indicated otherwise.

2/ Data for 1988, unless otherwise noted.

3/ Excludes 2nd quarter data for Maui County percentages based on comparable coverage.